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ABSTRACT

A study described social and gender equality in vocational education, particularly in commercial education, and in working life in Finland. It reflected on educational equality in Finland as a factor in the reforms of vocational education carried out in the 1980s and 1990s and on the link between educational equality/inequality and educational recruitment patterns. To achieve equality, the scope for choice available to students was extended and a two-step selection process was established, where students chose a field of study and, after a year of studies, a specialization line and the level of their further studies. Concepts central to the study were educational and gender equality, social closure, cultural capital, and individualization. Data sources included follow-up studies of the 1980s reform of upper secondary vocational education and of the polytechnics experiment carried out in the 1990s. Results indicated that a later choice of occupation did not eliminate selection on the basis of students' family background. In addition, female and male students' contrasting preferences were seen not only in the vertical but also in the horizontal distribution of their choices. Results of the polytechnic reform showed that students' willingness to consider university studies was linked with their social background. Educational choices were influenced not only by cultural capital but also by gender. (English and Finnish versions of the abstract are provided. Appendixes contain 226 references and 2 tables.) (YLB)

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RESEARCH REPORTS

1

SUOMENKIELINEN TIIVISTELMÄ

Marja-Leena Stenström

Educational and Gender Equality in Vocational Education

The Case of Commercial Education in Finland

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INSTITUTE FOR EDUCATIONAL RESEARCH
UNIVERSITY OF JYVÄSKYLÄ

Institute for Educational Research
Research reports 1

Marja-Leena Stenström

Educational and Gender Equality in Vocational Education

The Case of Commercial Education in Finland

INSTITUTE FOR EDUCATIONAL RESEARCH
UNIVERSITY OF JYVÄSKYLÄ

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ABSTRACT

The study describes educational and gender equality in vocational education, particularly in commercial education, and in working life in Finland. The starting point of its consideration of equality are the social selection process on the one hand and reforms of vocational education in Finland on the other.

Several sets of empirical data were drawn on during the research. Two of them were gathered in connection with reforms of Finnish vocational education: one is a follow-up study of the 1980s reform of upper secondary vocational education, the other a follow-up of the polytechnics experiment carried out in the 1990s. Other materials exploited in the study are based on vocational education and school-to-work transition statistics.

One of the aims of the 1980s reform of Finnish upper secondary vocational education was to achieve educational equality among other things through a two-step system of study field choice. In addition to equalizing parental background the goals of the reform included equality between genders. However, despite the delay in students' choice of their study levels under the two-step selection system, the results showed that a later choice of occupation did not eliminate selection on the basis of students' family background. In addition, female and male students' contrasting preferences were seen not only in the vertical but also in the horizontal distribution of their choices.

The polytechnics reform that took place in the 1990s was no longer as centrally concerned with educational equality as previous reforms. What was found about intentions to engage in further studies among polytechnic students of administration and commerce was partly analogous to findings made in upper secondary vocational education. Students' willingness to consider university studies was linked with their social background.

The study's results concerning educational selection already revealed that educational choices are influenced not only by cultural capital but also by gender. The choices that students make within the educational system are reflected in the positions that they gain in working life. It is a well-

known fact that the labour market is segregated along gender lines. Women and men are employed in different fields and occupy different socioeconomic positions irrespective of identical educational levels. Women work in service occupations and men in processing industry. It could also be observed that women's careers are characterized by horizontal, men's careers by vertical advancement.

The results substantiated the existence of a gender system and a gender contract. The gender-linked segregation of vocational education and working life is connected with the fact that school prepares students for their positions in working life and that individuals are allocated to working life on the basis of their educational choices. The hidden curriculum and the structural correspondence between education and working life are the chief mechanisms operating when education socializes individuals into their future positions in working life.

Reflecting on the findings of the study against the background of the discussion about the turn of modernity reveals that structural factors such as social inheritance and gender still affect student's educational and occupational choices. Even though the modern period has meant changes - social mobility and women's emancipation both in education and in working life - structural factors of this kind do not seem to have grown less powerful nor have grand projects withered away despite the assumptions of theories of the turn of modernity.

The questions posed or goals set by grand narratives remain unanswered or unattained. By contrast, in political debates their position has been undermined and as social ideals they are dead and buried. In other words, structural inequality has not gone away, but goals involving structural equality have lost much of their appeal. In modern society education and mobility are seen to contribute to educational equality, while in postmodern society they are though to disintegrate old communal social forms, such as the family and the work community.

Descriptors: educational equality/inequality, gender equality, vocational education, commercial education, educational selection, reform of educational system

TIIVISTELMÄ

Tutkimus kuvaa ammatilliseen koulutukseen ja työelämään valikoitumista koulutuksellisen ja sukupuolen tasa-arvon näkökulmasta, erityishuomion kohteena on kaupallinen koulutus. Lähtökohtana tasa-arvoisuuden tarkastelussa on valikointiprosessin ohella ammatillisen koulutuksen uudistukset 1980- ja 1990- luvun alkupuolella ja niiden yhteydet koulutuspolitiikan muutoksiin. Tutkimuksen aineisto koostuu em. aikoina kerätyistä koulunuudistuksiin liittyvistä tutkimusprojekteista. Lisäksi aineistona käytetään seurantatilastoja ammatillisesta koulutuksesta valmistuneiden siirtymisestä työelämään.

1980-luvulla käynnistyi keskiasteen ammatillisen koulutuksen uudistus, jonka tarkoituksena oli koulutuksellisen tasa-arvon toteuttaminen mm. kaksivaiheisen valintajärjestelmän avulla myöhentämällä erikoistumislinjavalinnan suorittamista. Huolimatta kaksivaiheisen valinnan aiheuttamasta koulutustason valinnan lykkäämisestä tulokset osoittavat, ettei myöhennetty valinta poistanut vanhempien taustan yhteyttä lapsen koulutustason valintoihin. Myöskin yhteys sukupuolen ja koulutusvalintojen välillä näytti edelleen säilyvän. Sukupuolten erilaiset valinnat näkyivät paitsi valintojen vertikaalisena myös horisontaalisena jakautumisena, sillä sukupuolten valinnat erosivat sekä koulutustason että alan mukaan.

1990-luvulla toteutetun ammattikorkeakoulu-uudistuksen tavoitteet, joustavuuden ja yksilöllisyyden lisääminen, liittyivät keskusteluun koulutuksen yhteyksistä modernin murrokseen. Tulokset ammattikorkeakouluopiskelijoiden jatkokoulutushalukkuudesta yliopistoon osoittivat, että koulutushalukkuus on edelleen yhteydessä sosiaaliseen taustaan, mutta yhteyttä sukupuoleen ei ilmennyt tässä tutkimuksessa. Ammattikorkeakoulusta halukkaimpia hakeutumaan yliopistoon olivat ns. keskiluokan jälkeläiset, joiden on todettu käyttävän koulutusta sosiaalisen kohoamisen väylänä. Tulokset antavat vahvistusta sille, että koulutuksellista eriarvoisuutta esiintyy ammatillisessa koulutuksessa, tässä tapauksessa kaupallisessa koulutuksessa, vaikkei tämän tutkimuksen perusteella ole mahdol-

lista tehdä johtopäätöksiä eriarvoisuuden lisääntymisestä tai vähenemisestä.

Koulutusjärjestelmässä suoritetut valinnat näkyvät sijoittumisessa työelämään ja vahvistuvat työelämässä. Tunnettu tosiasia on, että työmarkkinat ovat segregoituneet sukupuolen mukaan. Naiset työskentelevät palvelualoilla ja miehet jalostuksessa. Lisäksi naisten ja miesten tehtävät ovat eriytyneet sosioekonomiselta asemaltaan. Miehet työskentelevät naisia useammin johtavassa asemassa ja naiset puolestaan miehiä useammin alempina toimihenkilöinä. Naisten uralle näyttää olevan tyypillistä horisontaalinen ja miesten uralle vertikaalinen kehitys. Sukupuolisuuntautunut segregaatio koulutuksessa ja työelämässä on yhteydessä siihen, että koulu valmistaa yksilöitä työelämään ja yksilöt allokoituvat työelämän asemiinsa koulutusvalintojen perusteella. Piilo-opetussuunnitelma ja rakenteellinen vastaavuus koulutuksen ja työelämän välillä ovat päämekanismeja, kun koulutus sosiaalistaa yksilöitä heidän tuleviin asemiinsa työelämässä.

Peilaten tuloksia keskusteluun modernin murroksesta havaitaan, että rakenteelliset tekijät kuten sosiaalinen perimä ja sukupuoli vaikuttavat edelleen opiskelijoiden valintoihin. Vaikka muutosta on tapahtunut modernin aikana - sosiaalista liikkuvuutta ja naisten emansipaatiota niin koulutuksessa kuin työelämässä - niin ko. rakenteelliset tekijät eivät näytä kuitenkaan vähentyneen kuten modernin murroksen teoriat niin olettavat. Suurten kertomusten kysymykset tai tavoitteet ovat edelleen saavuttamatta, ja yhteiskunnallisessa keskustelussa niiden asema on heikentynyt. Rakenteisiin liittyvä eriarvoisuus ei ole poistunut, mutta rakenteisiin liittyvät tasa-arvotavoitteet ovat heikentyneet.

Hakusanat: tasa-arvo, eriarvoisuus, ammatillinen koulutus, kaupallinen koulutus, valikointi, koulunuudistus

PREFACE

The theme of educational equality has long interested educational sociologists, possibly because it has proved difficult to find unambiguous answers to the questions surrounding it. It has come to form the subject of my study partly because of my training (sociology), partly because of my work history (research assigments linked with vocational education, particularly with Finnish school reforms).

When I first came to the Institute for Educational Research in the early 1970s as a research assistant, I had the opportunity to become familiar with the broad and complex field of vocational education and training as a participant in a study of the learning materials in use there. The thematics of educational selection came to my attention at the end of the 1970s when I was investigating comprehensive school leavers' entry into the general/academic upper secondary school or vocational education in the joint upper secondary education selection. The follow-up project was carried out on the initiative of Professor Marjatta Marin, the then Director of the Institute for Educational Research, and Raimo Konttinen, then its Professor of Methodology. In the 1980s I continued my research on educational selection in a study of the functionality of the two-step selection system. The two-step selection system was created during the reform of Finnish upper secondary vocational education and its aim was among other things the promotion of educational equality. The present study originated in this follow-up project. The study also contains some material on the 1990s reforms of Finnish vocational education from the follow-up of the polytechnics experiment conducted by Dr. Raimo Mäkinen and Ms. Kristiina Korhonen. Apart from a few references, the study does not include the preliminary findings about the current reform of vocational education and training (the modular qualification structure).

Professor Marjatta Marin from the Unit of Sociology of the Department of Social Sciences and Philosophy has supported me throughout the long and twisting process of my research. My special thanks are reserved for her. At the Institute for Educational Research I have benefited from the useful comments of Dr. Raimo Mäkinen, first as Head of the Department of Vocational Education and later as leader of the research group on Individualization and Education. I have also had the opportunity to engage in fruitful collaboration with Professor Penny Burge from the Virgina Polytechnic Institute and State University that resulted in a comparative paper on gender differences in students' vocational education choices. The collaboration was made possible by an agreement of direct cooperation between the Institute for Educational Research and the Virginia Polytechnic Institute and State University whose conclusion was due particularly to the contribution of Dr. Johanna Lasonen. I wish to warmly thank all the above persons and my closest colleagues, particularly the members of the research group on Individualization and Education, for their cooperation and support.

Ms. Annikki Poutiainen, helped and advised me during the computer processing of my research data. Mr. Antero Malin, has given advice on the use of log-linear models. Ms. Minna Jokinen helped me with the practical tasks involved in the last stage of the research project. The research report was processed for publication by Ms. Kaija Mannström. The English papers and their summary could not have been written without skilful expert help. The separate papers were checked by Dr. Sauli Takala. The summary report was checked and partly translated by Mr. Hannu Hiilos. I thank all the above people for their smooth and efficient collaboration.

I also wish to thank Professor Marja Järvelä and Associate Professor Seppo Pöntinen, my pre-publication examiners, for their helpful comments and revision proposals.

The Institute for Educational Research has provided me with the physical facilities for my research and accepted the summary report for publication in its own publication series. During the final revision of the thesis I have also received financial support from the Academy of Finland. I would like to express my gratitude to both institutions.

Finally I wish to thank my family, my husband Ossi and my son Sampsa, for their patience with me during the seemingly endless course of my research and lifelong learning process.

Jyväskylä, August 31, 1997

Marja-Leena Stenström

LIST OF ORIGINAL PUBLICATIONS

This study is based on the following publications:

1. Stenström, M-L. 1992. Students' selection in vocational commercial education in Finland. Scandinavian Journal of Educational Research 36 (2), 121-131.

2. Stenström, M-L. 1993. Gender and equality in commercial education in Finland. International Journal of Vocational Education and Training 1 (1), 15-23.

3. Stenström, M-L. 1995. Polytechnics as a stepping stone to university? A case of commercial education in Finland. The Journal of Vocational Education Research 20 (4), 41-58.

4. Stenström, M-L. 1995. Gender stratification in education and labour force in Finland. In J. Lasonen & M-L. Stenström (eds.) Contemporary issues of occupational education in Finland. Institute for Educational Research. University of Jyväskylä, 43-55.

5. Burge, P. & Stenström, M-L. 1995. Comparison of American and Finnish gender-linked vocational program choices. International Journal of Vocational Education and Training 3 (1), 7-24.

I

INTRODUCTION

1 Starting point of the study

The classics of sociology (Durkheim 1956 among others) discussed education as a socially determined institution. A way to investigate the relationship between education and the larger society is analysing the functions of education. In most cases the social functions of education are linked with the economy and the structure of the labour force (qualifications), social stratification (selection) and culture (socialization). From the point of view of individuals the realization of such social functions leads to more or less rewarding outcomes as education enables them to move to better social positions or live a life worthy of their social positions and live a richer life (Järvelä 1991, 17). A frequent implicit starting-point in theories of qualification, socialization and selection is the supposition that individuals are allocated to social positions mainly at school. The hidden curriculum and the structural correspondence between school and working life are among the chief mechanisms assumed to socialize individuals into their future positions in working life (Jonsson 1988, 22).

Education prepares people to take up hierarchically differentiated social positions according to each student's social background. Socialization into a hierarchical society and selection to its various positions presuppose that those who will occupy given positions have also been appropriately socialized. This leads to inconsistencies and conflicts between publicly expressed goals and concrete actions (Levin 1978, 436-439; Kivirauma 1990, 14). The function of education is on the one hand to produce labour to fulfill the needs of industry and commerce, on the other hand to serve as a central source of equality and justice. The function of vocational education is to deliver qualifications and produce persons to serve in jobs that are differentiated both horizontally and vertically. It must simultaneously ensure educational equality and produce difference. These functions are mutually conflicting because production presupposes differently qualified labour while the ideology of equality demands equal opportunities to upward social mobility through education.

The findings of research confirm that education contributes to the social selection process. On the other hand, the radical social distinctions that emerge in education and the constancy of social differences have led to criticisms that school reproduces social inequality. The web of inequality linked with education may be described as follows. Firstly parents' education affects their children's education. In the second phase an individual's own education predicts his or her access to jobs and different positions. In the third phase the differences thus produced again affect the next generation. Depending on the theoretical starting points of the given perspective, it is a question of social mobility or of the reproduction of education.

The significance of education for individuals' reproduction lies in the fact that school prepares students for the positions of working life. The social division of labour produces social positions. There are three ways to describe the social reproduction process. Firstly it is possible to describe how positions are reproduced, that is, to focus on the reproduction of the class structure. Secondly it is possible to follow the way in which agents are reproduced, that is, how social positions are filled with individuals. Thirdly it is possible to see social reproduction as a special case called by Jonsson (1988, 10-11) the intergenerational reproduction of classes, that is, to ask which individuals attain which positions.

Education has been considered as an aspect of social selection, as a field of status competition, but also as storage for people surplus to the requirements of the labour market. It has been thought that expanding and lengthening education will lead to a meritocratic society where individuals' life career and status will be determined by their competence and enterprise rather than by inherited privileges. On the other hand, education has also been seen as competition for ever-narrowing routes leading to a limited number of valued positions. (Husén 1972, 1979, 1985; Jencks et al. 1972; Boudon 1974; Halsey, Health & Ridge 1980; Coleman & Husén 1985; Hurn 1985; Hallinan 1988; Kivinen & Rinne 1988, 1991). From a perspective based on Bourdieu's ideas, social positions are filled in a selection process where young people who possess varying amounts of capital enter different educational routes and levels and, through them, different positions in society (Bourdieu & Passeron 1977, 153; Jonsson 1988, 110; Ahola 1995, 19, 27).

Educational selection has been a central subject of research in educational sociology, which may, presumably, be partly explained by the fact that the problems involved in educational selection have also been among the concerns of practical educational policy. The selection process is, in essential ways, linked with educational inequality, a focus of interest among makers of educational policy particularly in the 1970s and 1980s.

After the Second World War Finnish society has formulated its educational policy primarily in terms of social mobility. In a society based on wage labour the state is one of the parties who define educational policy. Accordingly, a consideration of Finnish society after the Second World War becomes a consideration of the welfare state and its educational policy (Järvelä 1991, 35). Finnish educational policy emerged alongside the project of the welfare state, a project that made two demands on education: education must promote both economic growth and social equality. The principle of equal educational opportunities was an ideology that legitimised both reforms of the educational system and the implementation of the social selection function of education (Jolkkonen 1995).

Until the beginning of the 1980s educational equality meant in Finland chiefly equality in terms of social background and place of origin. Since the 1970s education and gender have attracted attention among educational sociologists of different countries, and since the 1980s equality has more and more often come to involve to the relationship between men and women (Julkunen 1988). The objective of gender equality was introduced into the Finnish school system for the first time in the Act relating to the Reform of Upper Secondary Education, issued in 1978. (Laki keskiasteen koulunuudistuksesta 1978). Behind this adoption of equality as an objective in Finnish educational legislation were international obligations.

The theme of educational equality and of the educational selection process is based on my previous research projects, studies of the selection process involved in comprehensive school leavers's entry to upper secondary education and to the world outside education (Stenström 1981, 1983) and, as an aspect of the reform of Finnish upper secondary vocational education, to basic programmes in forestry (Stenström & Hoppania 1984) and commerce and administration (Stenström 1984, 1988, 1991b; Stenström, Määttä & Jalkanen 1987) among other study fields.

The reason why the theme of educational equality has come to form the subject of the study is its relevance in the context of Finnish educational policy, for educational equality and the reduction of inequality were among the goals of the upper secondary vocational education reform carried out in the 1980s. A partial starting point of the study has been a project on the Finnish upper secondary vocational education reform that was concerned with the educational choices of commerce and administration students.

In addition the study considers, as an aspect of the 1990s school reforms in Finland, the willingness of students who participated in the polytechnics experiment to engage in further studies. The later reform of vocational education involving a modular qualification structure and students' educational choices, begun in 1995, (cf. Stenström 1997), will not be considered here. In the 1990s Finnish educational policy and school reforms have been less centrally concerned with attempts to establish social equality. Recent school reforms in Finland have been led by more individual-centred thinking (The development of education 1994-1996, 14).

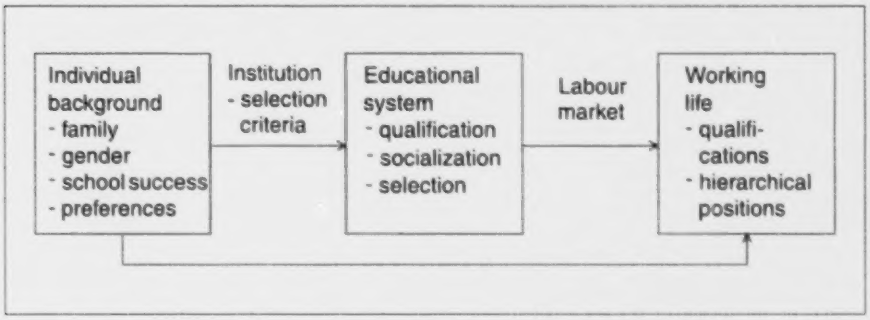

Individual background
- family
- gender
- school success
- preferences
Institution
- selection criteria
Educational system
- qualification
- socialization
- selection
Labour market
Working life
- qualifications
- hierarchical positions

Figure 1. *The social selection process in education and working life*

The present study uses the concept of the selection process to describe social and gender equality in vocational education, particularly in commercial education, and in working life. Its consideration of equality focuses on the educational selection process. In the analysis of the effect of gender, attention will also be paid to gaining access to the various positions of working life. In the foreground are the individual's own choices. The process of educational selection comprises the individual's own choices, educational establishments' criterion-based student selection and the effects that social background, gender and previous school success have on the individual's choices.

The present summary report first describes, in its introductory section, the link between the educational system and social development, followed by a discussion of the Finnish school system, particularly of changes that have taken place in vocational education, and of the relations between commercial education on the one hand and developments in working life on the other. The next section introduces the theoretical framework and concepts, linked with the selection process operating in education and working life, used in the study: educational and gender equality, social closure, cultural capital and individualization. Both the purpose and methods of the study and its results will be reviewed on the basis of the articles summed up here. The report is concluded by a discussion section.

2 Development of society and its educational institutions

The special features of educational institutions seem to be bound up with the characteristics of national economy and national productive activities (Lash & Urry 1994, 65-110). A consideration of the development of Western industrial societies and educational institutions since the 1960s reveals that educational institutions have indirectly indicated general social trends. Modernization is linked with the breakthrough of industrial society, the birth of capitalism and its growth into modern society. Agrarian society rested on the structures of small local communities. There was as yet no need for an education that would have gone beyond local needs and established traditions, for an occupation was learned at work and in action (Allardt 1989; Antikainen 1993, 103).

Industrial, modern society created new communities and a new society associated with the idea of the nation state. Industrial culture presupposed an uniform culture, industrial language and literacy (Allardt 1989). Industrial society has based itself on the ideas of the Enlightenment, the foundation on which it has built its educational system (Durkheim 1956).

Industrial culture created new kinds of occupational needs, where craftsmanlike skills had lost the central value that they had possessed in the old culture. In addition, industrial culture presupposed a new kind of distinction between intellectual and manual work which meant a differentiation between intellectual and manual labour. The emergence of a need for vocational education may also be traced to this distinction. (Väärälä 1995, 118).

The historical roots of the Finnish educational system go back to Continental and particularly to German tradition. The formation of general vocational training is linked with the development of industrial culture. The early roots of vocational education are to be found in the growth of medieval craft guilds. In Finland vocational education has been integrated with the school system rather than with an apprenticeship system. School-based vocational training emerged in Finland on a large scale only during the period of rebuilding that followed the Second World War, but its roots are again traceable to the age of industrial breakthrough after the middle of the 19th century. Technological development and a more detailed division of labour meant also an increasing need for vocational education. The role played by vocational training in modern society was linked with an increasingly detailed division of labour. (Tuomisto 1986, 67 - 110; Väärälä 1995, 54-55).

The Finnish vocational education and training system was formed after the Second World War and significantly expanded after the reform of upper secondary education in the 1970s. The formation of vocational education in Finland has been determined by two factors. 1) The concrete challenge that has propelled the expansion of the educational system has been the country's industrialization process and the technological development of working life together with higher requirements for occupational skills. 2) The general challenge has been the emergence of a new society after the War and the sociopolitical challenges that it entailed. The educational system has been an aspect of the politics of the Finnish welfare state. This development was underpinned by the idea of education as a universal right and the idea of equality linked with it. In addition, vocational education has been an aspect of industrialization policy and labour policy. (Väärälä 1995, 15).

The educational institution has responded to challenges arising from the social division of labour and the development of production technology. The structure of Finnish industries has changed dramatically during the past few decades. The country has undergone an exceptionally fast transition from an agricultural society to the current industrial or post-industrial stage of development. In 1950 the percentage of people earning their livelihood from agriculture was 46, as compared with 11 in 1985. During the same period, the proportion of people working in service industries grew from 25 to 57 per cent. Women are also very actively engaged in Finnish working life, playing a very significant role on the labour market. The 1990s saw changes in the Finnish labour market, most notably growing unemployment and increasing instability. (Haavio & Kangaspunta 1993).

The new post-industrial society that is emerging is an open possibility rather than a completed structure. Giddens calls the present period radical modernity (Giddens 1990). Beck (1992, 127 - 129), again, speaks of risk society where traditional pillars are disappearing without being replaced by any new supports. In this new situation modernity is an indeterminate and transitional condition containing both old and new elements. The new modernization process is more complex than the earlier one. Beck speaks of reflexive modernity, a new type of social individualization process. Lash, in turn, (1994, 113-114) has argued that social change must be divided into three stages: 1) from tradition to 2) simple modernity and further to 3) reflexive modernity. He uses the concepts coined by German Tönnies, *Gemeinschaft* and *Gesellschaft*, to describe social change. Traditional society corresponds to *Gemeinschaft*, simple modernity to *Gesellschaft* and what follows it to a *Gesellschaft* that has become reflexive. The motor of this process is individualization. Simple modernity is modern in the sense that individualization has weakened such traditional structures as the extended family, the Church and the village community. Simple modernity does not yet represent full modernity because social structures, such as labour unions, the welfare state and social class have replaced traditional structures. According to Lash the modernization process will be complete only when advancing individualization frees individual action even from these modern social structures.

Väärälä (1995, 52) has constructed an ideal-model description of modernization. His model is based on different theories, chiefly on a consideration of changes in the economic and productive basis of society (e.g. Giddens 1990; Beck 1992). The focus of the stage theory of cultural change is Finnish society, particularly as seen from the point of view of labour (cf. Allardt 1989). It is characteristic of Finnish society that its occupational structure changed later than elsewhere in Europe but that after the Second World War it changed very quickly.

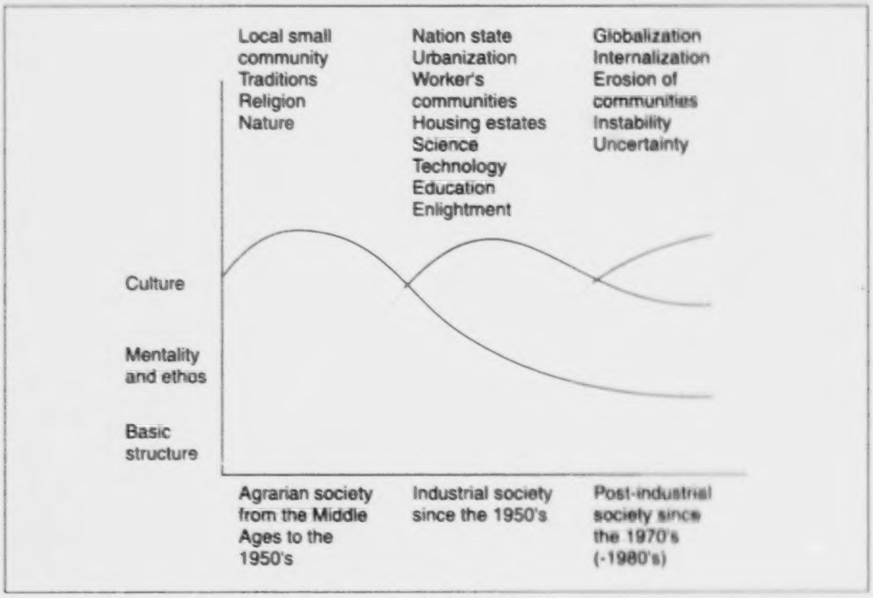

Local small community
Traditions
Religion
Nature
Nation state
Urbanization
Worker's communities
Housing estates
Science
Technology
Education
Enlightment
Globalization
Internalization
Erosion of communities
Instability
Uncertainty
Culture
Mentality and ethos
Basic structure
Agrarian society from the Middle Ages to the 1950's
Industrial society since the 1950's
Post-industrial society since the 1970's (-1980's)

Figure 2. *Cultural change (Väärälä 1995, 58)*

The figure describes the economic and productive basic structure of society and above the sociocultural changes linked with each basic structure. My own research is concerned with the post-1970s and -1980s society shown in the figure. In the 1970s and 1980s the Finnish school system emphasized uniformity and equality; the decade saw the creation of the Finnish comprehensive school system and the drafting of plans for a reform of upper secondary vocational education. Seen from this point of view the Finnish school system was still living in a time of modernity, with the result that education bore very few signs of the post-industrial period. In the 1990s even the goals of school reforms have begun to display features of post-industrial society.

However, in the light of the turn of modernity we may ask how far the weakening of traditional socialization agents actually affects all young people with their various starting points, and how far the features of the period following modernity are discernible in the Finnish school system. One of the dangers of individualization may be social inequality. It is assumed that the role of the family as a socializer of the young will be reshaped with the result that social background will no longer give them a complete social position but instead an individual's own ego will become a more independent personal project (e.g. Ziehe 1991; Beck 1992). Individuals will shape their identity through their everyday choices and decisions, among other things through their educational and occupational choices (Stenström 1993a).

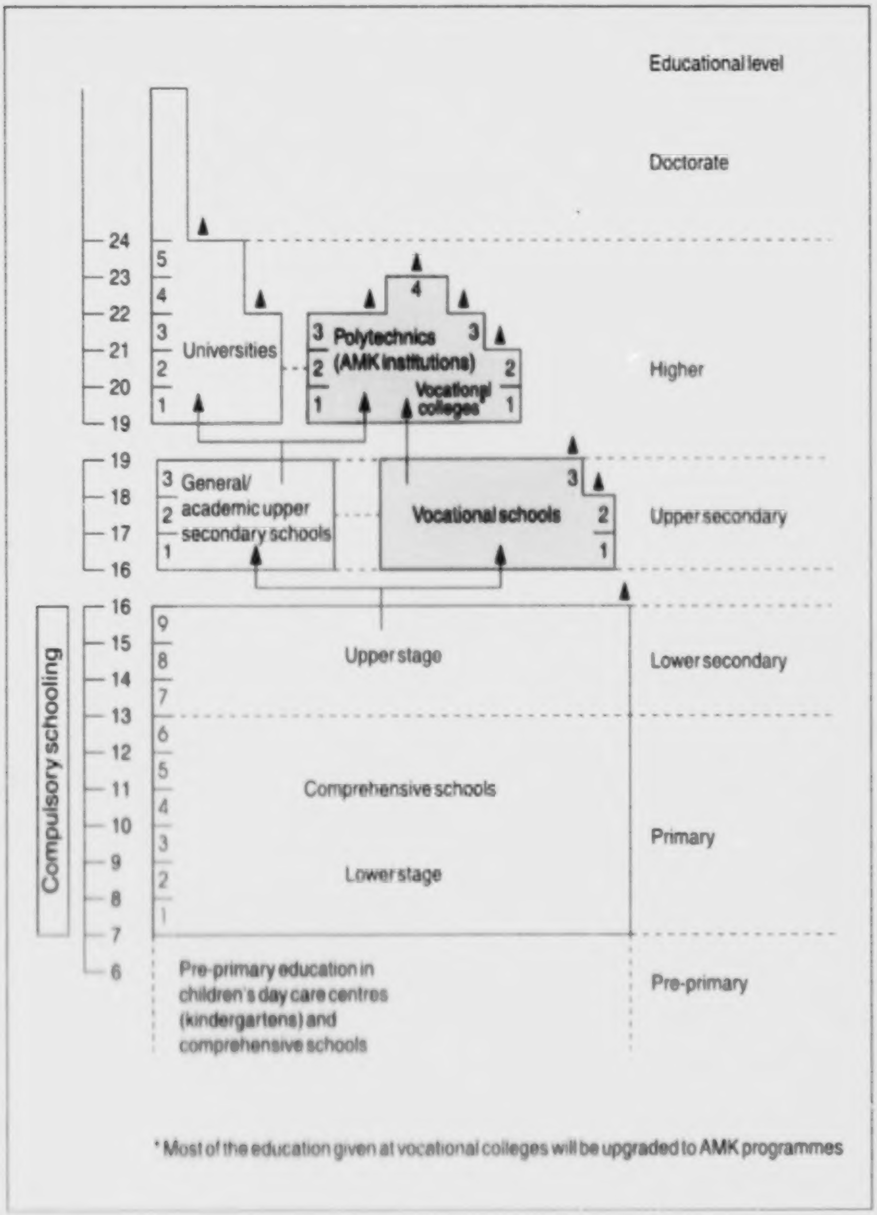
From the point of view of education the future is, in the midst of the turn of modernity, increasingly beginning to appear as an open possibility and on the other hand as new risks that are awaiting us. The educational institutions of industrial society were established for other kinds of cultural condition, linked with needs entailed by the creation of a uniform culture and the emergence of an increasingly detailed industrial division of labour. According to interpretations of theories of the turn of modernity, the functions of education are being transformed. School as an institution is forced to compete with other institutions. (Väärälä 1995, 58).

3 The educational system and reforms of vocational education in Finland

3.1 The educational system

In Finland, the educational system consists of the comprehensive school (providing primary and lower secondary education), the general upper secondary school, vocational and professional education institutions and the universities (Figure 3). The comprehensive school is compulsory for all 7- to 16-year-olds. Post-compulsory education is divided into general and vocational education. General education given in the general or academic upper secondary school lasts three years and concludes with the external high-stakes Matriculation Examination, which gives those who pass general eligibility for university studies (Education in Finland 1994, 15). Finnish vocational education is school-based. Apprenticeship training accounts for only about 5 per cent of the intake to vocational education (Higher education policy in Finland 1996, 18).

In the post-war period, the main goal of Finnish educational policy has been to raise educational levels and to offer all citizens, irrespective of their place of residence, economic status, mother tongue and gender, equal educational opportunities. This goal has largely been attained. About 90


Educational level
Doctorate
Higher
Upper secondary
Lower secondary
Primary
Pre-primary
24
23
22
21
20
19
19
18
17
16
16
15
14
13
12
11
10
9
8
7
6
Compulsory schooling
Universities
5
4
3
2
1
Polytechnics
(AMK institutions)
4
3
2
1
Vocational colleges*
General/ academic upper secondary schools
Vocational schools
Upper stage
Comprehensive schools
Lower stage
9
8
7
6
5
4
3
2
1
Pre-primary education in children's day care centres (kindergartens) and comprehensive schools

* Most of the education given at vocational colleges will be upgraded to AMK programmes

Figure 3. *General, vocational, professional and university education in Finland (Higher education policy in Finland 1996, 19)*

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per cent of each age group completing their compulsory education proceed to the upper secondary level. More than half of them continue in the academic upper secondary schools while a third enrols at vocational institutions, 5 per cent continue their studies in the optional tenth form of the comprehensive school and 10 per cent go to work or postpone their further studies. A somewhat unique feature of the Finnish educational system is the fact that more than half of those leaving the academic upper secondary schools with a Certificate of Matriculation enter vocational schools or colleges or polytechnics. (Education in Finland 1994, 27).

Finnish students have chosen and continue to choose between types of post-compulsory education on the basis of gender and social background (cf. Stenström 1981; Kivinen & Rinne 1995a; Higher education policy in Finland 1996, 21). Girls enrol at the academic upper secondary school more often than boys, the majority of whom enter vocational education after completing the comprehensive school. Because most general upper secondary school graduates continue their studies in vocational education after their graduation, girls form a majority also of vocational students. In 1994 the proportion of women among general upper secondary school students was 59 per cent, among vocational education students 53 per cent and among university students 52 per cent (Higher education policy in Finland 1996, 21). As for the effect of social background on choices between types of post-compulsory education, children of workers and farmers choose vocational education while children of white-collar workers go to the academic upper secondary school and after it to university (Kivinen & Rinne 1995a,1995b).

3.2 Reforms of vocational education

The Finnish comprehensive school reform began in 1971 and was implemented gradually over the next ten years. The main objective of the reform was to offer the whole age group nine years of compulsory schooling. This was followed by a reform of upper secondary vocational education.

The end of the 1970s saw the launching of a reform whose aim was to consolidate Finnish vocational education into a smaller number of basic programmes (study fields) resulting in a system with 26 basic programmes. They were further subdivided into more than 200 specialization lines. Students who started vocational studies after the comprehensive school chose in their first year one of the 26 basic programmes. After that they selected an either college-level (higher) or school-level (lower) specialization line (see Appendix 1). The purpose of the reform was, among other things, to make students entering vocational education choose their subject before choosing the level of their studies. It was supposed that they would choose their study level on the basis of their achievement during the first-year introductory period and that social background would no longer influence their choices. However, as indicated by research findings (Stenström 1991b, 1992), the new system did not succeed in removing the influence of social background.

Until 1995 students were offered three levels of vocational qualifications: school-level, college-level and higher vocational qualifications. School-level qualifications take 2-3 years, college-level qualifications 2-4.5 years and higher vocational qualifications 3-4.5 years to complete. The Finnish system of vocational education has been characterised by a very wide selection of vocational qualifications of varying scope and level. There are separate vocational education programmes leading to the same qualifications for those entering vocational education from the comprehensive school and from the academic upper secondary school. (The development of education 1994-1996, 14; Lasonen & Stenström 1995).

In 1995 the division of vocational education into 26 basic programmes and more than 200 specialization lines was abolished. Vocational education was reorganised into study programmes based on occupational sectors and fields and forming a modular system. Today Finnish vocational schools provide 77 basic vocational qualifications taking 2 to 3 years to achieve. A reform of vocational education to be implemented from 1995 onwards will seek to simplify the system and reduce multiple education. The strategy is to increase, through inter-institutional cooperation and the administrative consolidation of separate institutions and programmes on both the secondary and post-secondary level, the range of flexible options available to students, for instance by giving them an opportunity to combine the two types of education. (The development of education 1994-1996, 15).

The other experimental project carried out by Ministry of Education in the 1990s involves the experimental provision of tertiary vocational education in polytechnics. The Finnish polytechnics (AMK or *ammattikorkeakoulu*, "professional and vocational higher education institution") are institutions of professional and vocational tertiary education that can be seen as a Finnish version of the German *Fachhochschulen* or the Dutch HBO. The Finnish polytechnics have been developed from former vocational colleges and higher vocational education institutions. The higher vocational education reform was launched with legislation on experimental polytechnics passed in 1991. Twenty-two temporary polytechnics were established under the Act. The first nine permanent polytechnics began their operations in the autumn of 1996. Six new temporary polytechnics were also included in the experiment, raising the total number of such institutions up to 28. The number of new students enrolling at polytechnics represents more than 50 per cent of the entrants into post-secondary vocational education in Finland. Polytechnics provide education oriented towards the technical, commercial and service sectors and the primary production sector of Finnish working life. (Higher education policy in Finland 1996, 79; The development of education 1994-1996, 46).

Polytechnics offer programmes that respond to the changing qualification needs in working life and supplement academic higher education. A polytechnic degree requires 3.5-4 years of full-time study. The degree should be seen as a channel not to universities but to working life. (Parviainen 1994, 74).

At the same time, vocational colleges continue to offer college-level education, even though to declining numbers of students. They now train students for 53 qualifications, taking between 2 and 4.5 years of post-comprehensive-school studies to achieve. (The development of education 1994-1996, 47)

4 Commercial education in Finland

School-based commercial education began in Finland in 1839, when the first commercial school was established in Turku. This oldest Finnish commercial school was a pioneer in the education of women, for from 1870 women were admitted as students. The next commercial school was founded in Oulu in 1864. These first commercial schools were private educational institutions. They gave two-year training and the condition of admission was the completion of the elementary school. Later commercial colleges similarly offered two-year training but required their students to have finished the lower secondary school. One-year courses for those who had taken the Matriculation Examination were introduced in the 1930s. (Santonen 1989, 15, 208; Kivirauma 1990, 77).

Students favoured commercial schools up until the early 1960s, when the number of students attending commercial colleges began to rise quickly. Some of the educational expansion brought about by the baby-boom generation that was born after the Second World War found its way into commercial education because of the increased number of student places offered there. Student places were increased for several reasons. After the Second World War, the industrialization and urbanization of Finland in the 1950s and the 1960s led to greater numbers of people moving to service occupations with the result that commercial and administrative education was expanded to meet the demand for labour. Commercial education establishments gained in popularity as urban ways of life became more general. Previously institutions of commercial education had been established in cities and towns, but now townships and rural districts also wanted them because they were seen as centres of economic and intellectual stimulation. Another reason for increasing the number of student places was the fact that in terms of costs commercial education establishments are cheaper than other vocational education institutions. Attitudes towards education were also changing, and the baby-boom generation was given as good an education as the resources of their families and the Finnish society permitted. (Santonen 1989, 208).

Down to the present time commercial education has been one of the most sought-after sectors of vocational education at the same time as it has also taken a lead in reforming vocational education. Thus, the reform of Finnish upper secondary vocational education began in 1983 with the commercial and administrative basic programme. Commercial and administrative training offered to comprehensive school leavers comprised a one-year general course common to all students followed by a specialization course whose length varied depending on the student's study programme (Appendix 1, Figure A1). Students have received a broad-based training, a general education in commerce and administration largely paralleling the educational provision of the academic upper secondary school (Hörkkö 1994, 31)

The condition of admission to the general course of the basic programme was graduation from the comprehensive school. Those wishing to enter the programme applied and were selected during the joint student selection to upper secondary education institutions. The general course gave the student a grounding that helped him or her to decide whether to take a one-year school-level or a two-year college-level specialization course. The students selected their specialization course according to their personal preferences and their achievements during the general course.

The polytechnic began its development in Finland in the early 1990s on an experimental basis. Today it, also including a commercial polytechnic, is establishing its position as a part of the Finnish school system. The polytechnic represents the non-university sector of the Finnish educational system, and it is being developed on the basis of the former vocational colleges. To gain entrance applicants must have a upper secondary education (general upper secondary school or vocational school) certificate.

In 1995 vocational education, including commercial education, was reorganized into a modular system. Students first complete a course corresponding to the earlier school-level programme (basic vocational qualifications), and then continue their studies in a college or a polytechnic. Study times required to achieve different qualifications will remain as before. Upper secondary school graduates will apply for direct admission to college-level or polytechnic education (Parviainen 1994, 67).

5 Employment patterns in commerce and administration

A factor that has influenced the ways in which work in commerce and administration has changed is the post-war social development that increased demand for goods and services together with the technical development of tools and instruments. During the move from an industrial society towards a post-industrial society technology, the source of new forms of production, has served as the motive power behind social change. In the field of commerce and administration information technology arrived in the 1970s and 1980s.

The number of jobs available in commerce and administration grew quickly in the 1980s, a decade which also saw the development of a labour shortage. Because of the shortage, untrained workforce was also recruited. Selling has not required any special vocational training, and the recruitment of trained workforce by commercial enterprises has been below average. In addition, the retail trade has increasingly recruited married women, providing a central channel through which a growing number of women (with children) have entered the labour market. Since the end of the decade depression increased unemployment also in commerce and administration. The proportion of worker-level jobs has fallen, while specialist jobs have been created. (Nätti 1987, 33, 98; Mikkonen & Peisa 1994, 14, 43).

Another reason for changes in work tasks are changes in education and training, where the proportion of holders of college-level qualifications among upper secondary commercial education institution leavers now exceeds the proportion of holders of school-level qualifications. In the future the proportion of commercial college graduates will decrease because the labour market will be taken over by commercial polytechnic graduates.

Commercial and administrative tasks have also become differentiated along educational lines. The most common job titles among employees with school-level qualifications were sales staff and general office clerk. Those who had completed the college-level study programme were usually secretaries or general office clerks (Koulusta työelämään 1993). Women (67%) were more often than men (25%) assigned administrative, accounting and office technical tasks. Men (34%) were in their turn more often than women (11%) employed in commercial jobs. Despite the fact that among commercial college graduates women had better basic education than men, men were found in managerial positions more often than women (Borg, Kurikka & Virta 1988, 57).

In terms of their social position commercial college graduates closely resembled the average white-collar worker. Most commercial college graduates who had entered working life were employed by the private sector (79%), while the rest worked in local and central government. Men in particular tended to work in the private sector. Most graduates were employees (82%), only 4 per cent being entrepreneurs (Koulusta työelämään 1993, 92, 99).

At the end of the 1980s occupations requiring commercial college qualifications remained fairly stable. In 1990 the unemployment rate was 2.5 per cent in the commercial sector and 2.1 per cent in the financial and insurance sector. In 1995 the corresponding percentages were 15.5 per cent for the commercial sector and 12.7 per cent for the financial and insurance sector (Suomen tilastollinen vuosikirja 1996, 344). In 1990 the employment rate for all sectors of working life was 3.4 per cent while in 1995 the percentage of Finns without a job was about 17.2 per cent. The unemployment rates of those employed in the commercial sector were found to be below average.

It is assumed that in the commercial sector structural change will mean, apart from the increased importance of marketing, the centralization of the retail trade on the one hand and an increase in the number of specialized shops on the other. It is expected that the occupational structure of office jobs will change in ways characterized by higher skill requirements. Because of the increased use of information technology there will be, relatively speaking, less demand for clerical assistants. By contrast, the demand for secretary-type labour force employed in more broadly-based tasks will grow. The number of executives and middle managers is assumed to fall, while the number of expert consultants will rise slightly (Väestön koulutus 2000, 1988, 13, 15, 33). The aim of Finnish polytechnics is training their students for specialist positions.

The most topical challenges facing working life and vocational training in Finland stem from change factors linked with the economy, unemployment and internationalization. Entrepreneurship is growing and high unemployment makes it necessary to look for new forms of work and action. Promoting entrepreneurship calls for the support also of commercial education. Entrepreneurship is increasingly associated with an element of compulsion. Entrepreneurship also requires an expanded provision of entrepreneurship training among potential entrepreneurs, which makes commercial training increasingly important (Hörkkö 1994, 31; Jukka 1995, 1).

II

THEORETICAL AND RESEARCH-BASED DISCUSSIONS ABOUT EDUCATIONAL SELECTION AND EQUALITY

The chapter summarises the theoretical discussion and the concepts that have been central to this study. The discussion about the process of social selection and educational equality has moved from social mobility to social reproduction and further, in connection with the turn of modernity, from equal educational opportunities to individual choices. The central theme of the study is equality/inequality, particularly educational equality, considered from the point of view of social background and gender. Its frame of reference is Bourdieu's theory of cultural capital together with Weber and neo-Weberians' theory of social closure. Both theories include the idea of closure but address it in different terms. The section also deals with the discussion linked with individualization, one of the background factors of school reforms carried out in the 1990s. Individualization is discussed mainly on the basis of the arguments put forward by Beck.

The discussion about gender equality is presented here in separate chapters even though the above theories may also be applied to the subject of gender. The theory of social closure has been developed further to serve the needs of research on equality between occupations and genders. By contrast, Bourdieu's theory of cultural capital and Beck's individualization thesis make little or no reference to gender.

1 Equality

One of the most obvious facts about society and social life is the existence of major divisions between people based on or related to differences and inequalities. Sociology is not the only discipline interested in the relationship between class and education. Such interests have their roots in the philosophical and political question of equality as a whole (Reid 1986, 174-175). Theories of class and stratification are based on specific historical divisions of labour within specific societies, as was already indicated by Durkheim. The division of labour is also a major source of social, economic, political and cultural inequality.

Throughout the industrialized world educational reformers have tried to promote equality of access to educational institutions (Jonsson & Mills 1993). Jencks et al. (1972) and others have argued that the central research question in sociology of education since World War II has been the relationship between schooling and social inequality. In the Nordic countries Husén (1972) has studied educational equality and analysed the concept of equality of educational opportunity.

The origin of social inequality is to be found in the existence of norms of behaviour and their associated sanctions. According to Dahrendorf, the origin of inequality lies in certain inherent features of all human societies (Dahrendorf 1968, 171). Following Rousseau, Dahrendorf also makes a distinction between natural and social differences and further argues that we may distinguish between inequalities that involve some form of evaluative rank order and those types of inequality which are not connected with such mechanisms (Dahrendorf 1968, 154).

A sociological tradition has asserted the social significance of inequality or, more directly, argued that social stratification has an important functional contribution to make to the continuity of social systems. This functional theory of stratification was closely associated with the sociological perspective of Parsons, Davis and Moore. The main effect of Parson's (1940) seminal essay was to make American sociologists familiar with the idea of a theory of social stratification. The theory was not taken up for discussion until 1945, when Davis and Moore (1945) published their paper where they argued that inequality was a functional necessity in all human societies.

The idea of the functional theory of social stratification, in all its weakness, can be stated in the following terms. In every society there are different positions. Some social positions are functionally more important than others in the sense that they significantly contribute to the maintenance and continuity of the whole social system, and therefore require special skills for their performance. Only a limited number of individuals have the necessary skills and talent. Therefore, social awards are also scaled. The distribution of social awards becomes a part of the social system and leads to the stratification of society. It follows that social inequality is necessary because without it the occupational positions of societies cannot be adequately filled (e.g. Rauhala 1966, 5; Dahrendorf 1968, 164; Turner 1986, 39).

The theory carried with it the implication that functional stratification was a universal feature of all social systems and, consequently, that social inequality was actually necessary for the continuity of social life. The functional theory of stratification is essentially an argument from equality of opportunity. It is unable to answer the problems raised by two other concepts of equality, equality of condition and equality of outcomes (Turner 1986, 40). Further, societies will assign different social positions different tasks and responsibilities, but such differentiation does not necessarily involve social stratification.

Sociologists typically talk about inequality, not about equality. Bryan Turner (1986), however, has dealt with equality. Turner (1986, 18) conceives equality as a value and as a principle, an essentially modern and progressive idea. After the French revolution the principle of equality involving has become one of the central elements of modern forms of social change the reorganization of societies. Equality can actually be used as a measure of what it is to be modern and of the whole process of modernization. The modern concepts of equality of opportunity and equality of educational opportunity developed within a historical discourse about the benefits and requirements of a capitalist market. It is usual to identify four types of equality (Turner 1986, 34-36):

1. The first type is ontological equality of persons. The idea of an ontological equality between human beings is shared by certain religious and moral traditions.
2. Secondly, there is equality of opportunity to achieve desirable ends. The idea of equality of opportunity is characteristic of liberalism. In principle it means that everyone should have open access to important social institutions on universalistic grounds, especially on the grounds of achievement and talent. The debate about equality of opportunity has been an important factor in the development of modern educational institutions, where high position and attainment are in theory based on intelligence, skill and talent regardless of family background. This feature gave rise to an important idea in modern social theory, namely that of meritocracy, a social system where positions would be filled on the basis of personal merit. In a meritocratic system all must be given an equal opportunity for gaining access to education and jobs corresponding to their abilities (Young 1958; Coleman 1966; Jencks et al. 1972; Turner 1986, 35).
3. Thirdly, there is equality of condition, involving an attempt to make the conditions of life equal across relevant social groups. The concept of equality of opportunity is closely related to and hard to sep-

arate from the idea of equality of condition. The proponents of the theory of cultural capital have argued that educational success is primarily determined by the extent to which individuals have absorbed the dominant culture (Bourdieu 1973).

4. Fourthly, there is equality of outcome or equality of result, which Turner (1986, 36) sees as the most radical idea of equality. The aim is to use legislation and other political means to achieve equal outcomes regardless of starting point and natural ability.

Turner (1986, 36-37) has also discussed some arguments against equality:

1. The first argument is that the different components of equality are often mutually incompatible. That is, equality of opportunity and condition tend to produce inequality of results.
2. The second argument is that a political programme to secure radical equality of condition or equality of outcome would require massive social and political regulation by the state (resulting in a totalitarian and authoritarian regime).
3. The third argument is that some forms of radical equality are not desirable, since the achievement of equality may be incompatible with other values which are also desirable.

Equality means equality in some relationship. It follows that achieving equality in one relationship can mean increasing inequality in other relationships. The aim of equality is diversity. Equality seems desirable because people are different (cf. Lehtisalo & Raivola 1992, 70).

1.1 Educational equality

The concept of equality of educational opportunity has undergone important changes over the decades. Until about 1950, it had a relatively simple and restricted meaning, referring to the equal rights of all people to enter education. Changes came during the 1970s. In the mid-1970s an increasing number of critics began to define equality of educational opportunity as the existence of roughly proportional educational outcomes for all student groups (Hurn 1985).

Coleman (1966, 1968) has made a first large-scale attempt to empirically analyse equality of educational opportunity in a national educational system, that of the USA. He distinguishes four conceptions:

1. In pre-industrial society equality had no relevance. In those days, family was both a unit of production and the institution chiefly responsible for social welfare and education. Further, geographical, occupational and social mobility was minimal.
2. The industrial revolution changed the role of the family. Children became occupationally mobile outside their families. Schooling and social welfare became community responsibilities and institutions were provided where young people could learn skills that they needed outside the family.

3. In terms of policy-making the aim was to construct a system where all children, irrespective of social background, would be offered formal equality in the sense of equal and free access to education.
4. The liberal conception of educational equality took the children's future for granted. The core problem was whether equality should be seen as a starting point or as a goal.

Husén (1972, 14) has dealt with the same theme in the Nordic countries through an analysis of the concept of equality of educational opportunity. From the viewpoint of the individual, equality can be conceived in three ways: 1) as a starting point, 2) as a treatment, and 3) as a final goal, or as a combination of all three. First, equality can be seen as a state existing when all individuals start their educational career. Secondly, equality can be thought of as equal treatment. Everybody should be equal in law. Thirdly, equality of educational opportunity could be regarded as a goal.

Husén (1972, 28-39) distinguished three major stages in the development of the concept of educational equality. There are 1) the conservative, 2) the liberal and 3) the new radical conception of educational equality.

1. The conservative conception of equality of educational opportunity
   The conservative conception of equality of educational opportunity was prevalent in most industrialised countries until World War I. The central idea was that God had bestowed different amounts of talent upon each human being. It was up to the individual to make the best possible use of his or her God-given capacity. However, economic changes led to demands for new types of schools, and rapid industrialization in particular brought about a demand for adequately trained white-collar workers.
2. The liberal conception of equality of educational opportunity
   The philosophy behind the liberal conception of equality of educational opportunity states that each individual is born with a certain relatively constant mental capacity or intelligence. The educational system should be planned so as to remove external barriers of an economic and/or geographical nature that prevent able lower-class students from taking advantage of their inborn intelligence. Through education all members of society should be given the social status to which their inherited aptitudes entitle them. This philosophy has guided many structural school reforms in Europe during this century.
3. The new radical conception of equality of educational opportunity
   Husén saw that in a highly selective and competitive system inequalities do in fact remain, or even tend to increase. Equality of educational opportunity cannot be achieved simply by removing certain material barriers and by using academic ability as the democratising criterion. Recent studies have indicated that Husén is quite right in his analysis of educational equality.

The basic difference between the liberal and the radical conception is how they view the role of the educational system. According to the liberal conception, success and failure at school depend primarily on the individual student. According to the radical conception, a student's success must be ascribed mainly to the situation at school, particularly to the way instruction is organised. According to more radical conception of equality of educational opportunity, in order to achieve an acceptable standard of living remedial action must be taken in the wider context within which schools are operating. However, educational reform cannot be a substitute for social reform.

Coleman (1975) has later argued that the concept of equality of educational opportunity is misleading and mistaken because it implies that equal educational opportunity is achievable, which it is not. He has suggested that a proper formulation would be 'reduction in inequality' rather than 'equality'. Further, Coleman (1990) has pointed out that the full opportunity of equality can only achieved if all factors affecting social status outside schools disappear. The students come to school with the advantages and disadvantages of their background. Boudon (1974) argues that inequality of educational opportunity could only be eliminated if all social stratification disappeared or if the school system was totally undifferentiated.

A distinction has been made between the concept of equality of educational opportunity understood in terms of equalizing individuals' access to educational resources on the one hand and in terms of educational outcomes on the other. Defining equality of educational opportunity in terms of equal access to educational resources reflects a belief that there is competition for society's resources. This competition can also be seen as an avenue of upward social mobility. Equal educational opportunities should be available to all persons regardless of their social background or other ascribed characteristics. Defining equality of educational opportunities in terms of equal educational outcomes, again, stems from an interest in the equal distribution of societal rewards (power, status, wealth) and from a belief that there is a link between education and an individual's position in the social stratification system. There is a connection between the division of labour and the trend towards equality (Parsons 1952, 67; Hallinan 1988).

Parkin (1971, 13) has suggested that the inequality associated with the class system comprises two different processes, 1) the allocation of rewards attaching to different positions and 2) the process of recruitment to these positions. Although the processes of rewarding and recruitment are analytically separable, they are closely intertwined in the actual operation of the system. The meritocratic discussion of educational equality has been less concerned about inequalities in the rewards attached to different positions than about the process of recruitment to these positions. The present study similarly considers the subject from the viewpoint of recruitment to the positions available in education and in the labour force.

Equality of opportunity depends upon open and equal access to educational institutions meant to facilitate social mobility. Social inequality is maintained by a functional circle that connects class differences to the school system, to the persistence of classroom subcultures and to the cultural expectations operating at home (Young 1971).

As a rule educational inequality refers to inequality in educational opportunities. The basic idea is that each individual's educational opportunities should not depend on factors other than those linked with his or her talents. This view is based on the concept of meritocracy, which entails that an individual should achieve a social position corresponding to his or her abilities and education. Educational equality is not itself the goal but a means of attaining the objective of social equality. Educational equality has served as a tool in an attempt to redress differences in equality between members of a society where the aim was not only equal opportunities, but equal educational outcomes (Lehtisalo & Raivola 1992, 59).

One of the most significant research traditions in studies of education and equality are attempts to describe empirically the social and educational conditions of society. The dependence of educational attainment on social background has long been the focus of sociological studies as an indicator of inequality. Blau and Duncan (1967) were the first to elaborate the process of attaining social status. They suggested analyses of this process as a new approach to the study of social mobility. Their approach focussed on investigating how far an individual's occupational status is explained by his or her social background, how far by his or her own experiences. At the same time as Blau and Duncan were carrying out their research project, Sewell and his associates at Wisconsin were engaged in a closely related study of social, economic and psychological factors in educational and occupational aspirations and achievements (Sewell & Hauser 1975, 5). Studies belonging to this tradition often use adaptations of what has become known as the Wisconsin model of status attainment (Temple & Polk 1986; Carpenter & Hayden 1987; Anderson 1988; Graetz 1988). A variety of studies have shown that social class channels young people towards particular types of school and towards educational careers of particular length and character (Featherman & Hauser 1978; Halsey, Heath & Ridge 1980; Poole 1983; Western 1983).

There are at least two distinct explanations for the relationship between education and social background. According to one interpretation, a central mechanism is the class position of the parental family, the source of an individual's basic values. Another tradition puts more emphasis on the parental family's cultural than on its socioeconomic circumstances. The type of child-rearing, the complexity of parents' language (cf. Bernstein 1975) and the values associated with education differ among social classes and affect children's school achievement and educational choices. A famous formulation of how family background influences educational careers is the concept of cultural capital (Jonsson 1987).

1.2 Educational equality in Finland

In Finland as elsewhere the effect of children's and young people's social background on their educational and later careers is seen as a social selection process where first choices partly determine later ones. Young people from the upper social strata go to the general upper secondary school more often than those from lower social strata, who in their turn go to vocational education institutions more often that their peers from the upper strata (e.g. Kivistö & Vaherva 1979, 153; Saari 1980; Maljojoki 1981, 55-56; Stenström 1981, 77-79; Kuusinen 1985, 1992; Mäkinen 1988). Similar trends are discernible in entry to higher education (Elovainio 1974; Antikainen 1976, 25-26; Jalkanen & Määttä 1986; Kivinen & Rinne 1995a,1995b; Liljander 1994, 1996). Thus, right from the beginning children who come from the upper social strata are more successful at school than those from the working population, receive a longer education and gain better social positions after completing their education.

In the process of social mobility school is an intervening factor with two roles. On the one hand it may be an avenue of social mobility that is usually seen as an upward route. On the other hand, if education depends on social background then school is a means of transferring parents' social position to their children. Both roles presuppose a link between education and occupation; that is, education is the criterion used when allocating people to different social positions (Pöntinen 1983, 171). To consider the matter more closely we may distinguish two kinds of conclusion drawn by researchers about the influence of social background in the Finnish school system: it is either diminishing (Pöntinen 1990; Määttä 1992, 1995, 1996; Valkonen, Pensola & Jalovaara 1996) or increasing (Isoaho, Kivinen & Rinne 1990; Kivinen & Rinne 1995a). The former conclusions are based on age-group comparisons, the latter on comparisons between people who have graduated at different times, with the result that less attention is paid to changes in parents' social position.

Studies of social mobility carried out in Finland in the 1980s (Pöntinen, Alestalo & Uusitalo 1980; Pöntinen 1983; Alestalo 1986) revealed that in Finland social mobility has been more extensive than in England, France and Hungary. The Finnish society of the 1950s and 1960s saw the growth of the industrial working class and the middle class. However, in the 1970s the working class shrunk somewhat while the middle class continued to grow. In Finland the lower middle class is less homogenous than farmers, the upper middle class or the working class. The models of social mobility characteristic of the lower middle class differ from those of the upper classes, and the group is more sharply distinguished from the working class than from the upper middle class. In Finland there are no great differences in material well-being between the middle class and the working class. The distinctions lie in other areas of life, particularly in cultural participation.

The lower-middle-class way of life is closer to that of the upper middle class than to that of the working class (Alestalo 1986, 62, 94).

Occupational stability seems to be greater among members of the upper middle class that among members of the other classes, apart from farmers, and models of social mobility support this assertion. Most white-collar-workers come from the working class or the farming population. Industrial expansion, the extension of the service sector and a relatively strong welfare state have led to changes in the socioeconomic structure and thus made social mobility more widespread (Pöntinen, Alestalo & Uusitalo 1980, 36; Pöntinen 1983; Alestalo 1986).

According to both research findings and statistics, educational levels have risen in Finland. The number of people with tertiary degrees has increased between 1985 and 1990. If we pay attention only to graduates' social background, this increase in taking university degrees seems to have most benefited upper-level white-collar workers. In 1985 the percentage of children of upper-level white-collar workers with university degrees was 26, while in 1990 it was 38. Census statistics on the population as a whole (Ammatti ja sosioekonominen asema 1990, 1993, 54) show that from 1985 to 1990 the proportion of upper-level white collar workers has increased somewhat from 10 to 11 per cent. Their proportion has been rising steadily since 1960 as in 1960, 1970 and 1980 the corresponding figures were 5, 7 and 9 per cent.

While in 1950 the proportion of the population aged between 15 and 64 who had taken the Matriculation Examination was 3.2 per cent, in 1991 the figure was 24 per cent (Koulutus 1991, 139; Koulutus 1993, 174). Valkonen, Pensola and Jalovaara (1996) have analysed the equalizing effect of the comprehensive school on taking the Matriculation Examination, finding that the relative differences between social groups in proportions of members with the Certificate of Matriculation have diminished. They came to the conclusion that as regards taking the Matriculation Examination, social groups have become more equal since the establishment of the Finnish comprehensive school. The central message of analyses of university students (Määttä 1996) seems to be that participation differences between social groups have evened out in the 1970s and 1980s (cf. Ganzeboom, Luijkx & Treiman 1989; Jonsson, 1987, 1988, 1994). It seems reasonable to assume that the comprehensive school, the creation of a student financial aid scheme and improved geographical access to tertiary education have been among the most central equalizing factors behind this realization of the goal of educational equality. The volume of higher education provision has doubled in two decades, which cannot but have influenced access to higher education. According to Määttä (1996), it was the above structural reforms of the educational system that made possible a more equal participation in higher education.

By contrast, other Finnish studies suggest that there were no dramatic changes in the social inheritability of education in the 1980s (Hermunen

1984; Isoaho, Kivinen & Rinne 1990; Kivinen & Rinne 1995a, 1995b). Statistics for the years 1985 and 1990 describe only graduates' social background, not the population as a whole (cf. Määttä 1992, 1995, 1996).

According to Kivinen and Rinne (1995a, 1995b), it is obvious that in 1990 as much as in the 1980s Finland had three distinct educational traditions. Children of white-collar employees went to the general upper secondary school and then to university or vocational college. Working-class children took a school-level vocational qualification and entered the labour market. Children of farmers either attempted to directly follow in their parents' footsteps or applied to agricultural study programmes offered by vocational education institutions or universities.

Families' cultural, social and economic capital partly determine children's educational careers (Kivinen & Rinne 1995a, 1995b). Children of well-educated parents will themselves go through a long educational career while children of parents with little education will be content with a short educational career and choose vocational training. A family's educational and occupational traditions are transmitted from one generation to another without family members necessarily being even conscious of it. The throngs seeking to gain entry to higher levels of education are generated by the automatic generational rise in educational expectations. Practically all parents wish to ensure their children an education at least equal to and preferably higher than theirs (Hurrelmann 1985; Kivinen, Rinne & Ahola 1989).

Even though Finland has, for example by means of students' social assistance, wanted to construct a fair, minimally selective educational system that would favour equal educational opportunity, research reveals that a child's education is still clearly dependent on the education of its parents (Kivinen & Rinne1995a, 1995b; Liljander 1996).

Different social classes have different strategies of educational investment. Middle-class parents and their children are more likely to be interested in education as a way of maintaining their social status than working-class people. By contrast, children of the professional middle class are able to achieve their parents' class position only by acquiring a certificate, at the same time as they also have a class interest of their own. Children of this class find gaining entry to a profession, a process based on educational qualifications, as much of a hurdle as the other applicants. Working-class children may use education as a means of upward social mobility (Sewell & Hauser 1975; King 1987).

1.3 Persistence of educational inequality

In discussions of educational equality the subject is often considered, in terms of social background and above all of the educational opportunities of lower social groups, as a vertical dimension (what are the chances of children of lower social classes to apply for and be admitted into education and take a higher degree). Educational equality has been widely studied from this perspective in different countries. The findings have nearly without exception showed that children from middle and upper social groups enter higher-level education more often than children from lower groups. Researchers have found a positive link between school success and parents' social background that involves children of the middle and upper social classes applying to the most interesting and most selective educational levels and fields (cf. Liljander 1996).

Another way to consider educational equality is in terms of how social groups are able to preserve their status. Hurrelmann (1985) suggests that it is in principle possible that children of previously privileged families will in the future, after the redistribution of educational opportunities, find it harder to enter education and gain a certificate of graduation. Boudon & Lagneau (1980) similarly suggest that the chances of children from lower social strata to enter university have in the course of time improved faster than those of children from higher strata, whose chances of entering university have, by contrast, improved more slowly. Among Finnish researchers Pöntinen (1990) and Määttä (1992, 1996) have made similar findings. To defend their position families belonging to higher social groups develop powerful strategies to exclude other social groups. In education social closure may be achieved among other things by creating new fields or by emphasizing educational contents that require special skills (e.g. internationalism).

Long-term studies support the view that an egalitarian educational policy has been successful. Interpretations of whether egalitarian policies have achieved their goals are linked with whether they measure the increase of absolute or relative equality. Most analyses gauge the increase of absolute equality; and from this perspective it may be seen that the present generation is better educated than their parents (Karisto & Montén 1996, 9, 11, 13).

According to reproduction theories the educational functions of modern society serve its members by maintaining the occupational structure. School produces both the trained labour force and the social positions that these groups will fill. Educational qualifications are above all reflections of society's class structure and are used to legitimate the inequality of occupational opportunities. Representatives of reproduction theory acknowledge that there is a conflict between the legitimation and socialization functions of education. Education seeks to socialize children of lower social groups into society's dominant value system (Blossfeld & Shavit 1993).

Representatives of modernization and reproduction theories hold different views on whether social background has become more or less important in education. Theorists of modernization (Parsons 1970) and Treiman (1970) in particular assumed that the modernization and expansion of the school system would influence the educational selection process by reducing educational inequality. As compared to reproduction theories, modernization theories represent a more optimistic view, assuming that the influence of social inheritance will diminish over generations on all levels of education. Jonsson's research (1987, 1988, 1993, 1994) in Sweden and comparisons between different countries by Ganzeboom et al. (1989) have shown that both the influence of background variables and inequality in social mobility have diminished. According to Jonsson's study (1994), equalization has been most pronounced in the first transitional phase of school reform, when inequality has also been most conspicuous.

Representatives of modernization and cultural reproduction theories both agree that the expansion of lower levels of education will lead to greater equality of educational opportunities. They disagree on whether the disparities between different social groups will be preserved in higher education. Modernization theorists predict that the influence of social inheritance will weaken over generations while reproduction theorists assume that its influence will persist unchanged or even increase. According to this latter view, increasing educational participation will not lead to greater equality of opportunity between different social groups. In other words, the expansion of the higher levels of the educational system will not improve the chances of disadvantaged groups. (Blossfeld & Shavit 1993).

2 Social closure

The class structure has undergone important changes in recent decades. There are at least two distinct views about the permanence of social stratification. Clark and Lipset (1991) suggest that new patterns of social stratification are emerging. The key trend could be described as the 'fragmentation' of stratification. It involves the weakening of class stratification, the decline of economic determinism and the shrinking of the family. By contrast, Hout, Brooks and Manza (1993) consider that the emergence of new sources of inequality does not entail the disappearance of old ones. They argue that the persistence of class-based inequalities in human societies suggests that the concept of class will still play an important role in future sociological research.

Social class was the key theme in past work on stratification. Weber defined power as the opportunity of a person or group to impose their will against the opposition of others. In Weber's sociology, the key source of power in modern society is not ownership of the means of production. Power, which can be expressed in many ways, is the main dimension of inequality. Weber considers inequality a characteristic of all human societies, because societies are based upon a struggle between groups and individuals over scarce resources. Weber's sociology of stratification places the emphasis on distribution, consumption and the market (Weber 1968).

According to Weber, the concept of class is based on that of class position. Class position involves in the first place an opportunity to gain material goods, achieve external status and satisfy internal needs through the market. Class positions differ in the degree and quality of the access to goods or services that they make possible and in how such access affects income. Secondly they involve the kind of possession or control of goods or qualifications that a given class position enables its holder to gain. Class positions are determined through action, that is, through individual orientations to economic success that presupposes control of the means required for such activities. (Weber 1968, 302).

Class refers to individuals occupying an identical class position. Weber further categorizes classes into propertied classes, occupational classes and social classes. In propertied classes class position is based above all on differences in wealth. In occupational classes class position is based above all on access, through the market, to goods and services. Social classes comprise sets of positions within which mobility from one position to another is both easy and typical. The concept of social class is grounded on the control of the goods and qualifications that may be used on the market to earn an income. An additional criterion is social mobility. According to Weber there are four social classes: 1) the working class; 2) petty bourgeoisie; 3) the unpropertied intelligentsia and educated people; and 4) classes privileged because of their wealth or high standard of education. (Weber 1968, 302, 305).

To describe the internal, primarily vertical differentiation within classes Weber developed the theoretical concept of closure. In a competitive situation it is increasingly in the interest of the participants to limit competition in some way and to restrict the number of those allowed to take part. Access is restricted by making some characteristic shared by some of the competitors into a criterion of exclusion. In simplified terms exclusion entails the monopolization of certain conditions of participation. The usual goal of exclusion is the monopolization of material and other goods (Siisiäinen 1986, 205).

Social relations are closed when their semantic content or the social systems linked with them prevent or restrict participation or set conditions to those involved in them. Social relations are open to outsiders when participation is not subject to conditions. If those involved in a social relation assume that their position will be improved if they allow outsiders to take part, then they will be interested in keeping the relation open. If they are, on the contrary, interested in improving their position through monopolistic practices, then they will tend to favour a closed relation. (Weber 1962, 97-98).

Others have developed Weber's theory of social classes further on the basis of his analyses of the closure of social relations (e.g. Parkin 1979; Collins 1979, 1986; Kreckel 1980; Murphy 1984, 1988). Parkin (1979, 45) distinguishes between two main forms of closure, exclusion and usurpation. According to him, the distinction may be applied to discrimination both between and within classes. Exclusion refers to attempts by a group that has gained a privileged position to oust its competitors from the field for whose possession they contend. The goal is the preservation of the previously established privileges through the use of upward direction strategies. Exclusion may be based on personal characteristics, educational qualifications, gender, race, religion, language etc. Usurpation refers to disadvantaged outsiders reacting to their collective exclusion through the use of a downward direction strategy.

Parkin (1979, 68) distinguishes between two types of criteria for exclusion, collectivist and individualist. Collectivist types of exclusion might be based on lineage, caste, race, religion and ethnicity. Individualist criteria of exclusion are, for example, economic status and credentials. A meritocracy would be characterized by a particular type of exclusion based on individualist criteria.

Murphy (1988, 65) has further developed the framework of closure theory to eliminate what he sees as its limitations. One of them is the way in which the relationships between rules of closure and their structure is conceived. Parkin's version of exclusion theory in particular is based on the assumption that the excluded are those who in turn exclude others. However, Murphy (1988, 70-72) suggested another framework for analysing the structure of closure rules. He draws a distinction between principal, derivative, and contingent forms of exclusion, maintaining that the principal form of exclusion dominates the other, secondary forms. The principal form of exclusion is wealth while the derivative forms of exclusion are rules for the monopolization of opportunities derived from the principal form of exclusion. Contingent forms of exclusion, again, are often backed by the legal apparatus of the state.

A focus of exclusion is a particular approach to the general question of domination. Educational conditions for employment reflect the interests of groups that have the power to impose them rather than the technological skill requirements of the positions involved. Academic and vocational education may deliver the contents of a particular status culture rather than the technical and functional prerequisites for future work. Murphy argues that his framework for closure theory allows both technical and status-cultural requirements to function within a particular context of power. (Murphy 1988, 162).

Kreckel (1980, 531) has elaborated closure theory further by introducing a distinction between three different strategies of closure that may be pursued on the labour market: 1) exclusion, 2) demarcation and 3) solidarism (usurpation). Exclusionary closure strategies are mechanisms of intra-occupational control while demarcationary closure strategies describe processes of inter-occupational control. School credentials requirements are forms of exclusionary closure. Drawing on Kreckel, Witz (1992, 45) has presented an adaptation of closure theory describing the gendered dimension of occupational closure. She distinguishes two strategies of occupational closure: exclusionary and demarcationary.

Bourdieu's analysis of cultural capital can be regarded as a special theory of closure. He has formed his views on the basis of the conceptions and assumptions of closure theory. In his use the concept of capital is generalized beyond its usual economic sense (Murphy 1988, 20).

Closure theory is applicable to exclusion both in education and on the labour market. Closure strategies have both a class and a gender dimension, a subject that is of some relevance to this study. Both education and social inheritance may be seen as sources of status culture and as a criterion for belonging to status groups. Education also serves as a basis of exclusion from work positions. When considering vocational education, the subject of this study, exclusion may be seen to operate in two directions.

3 Social reproduction and cultural capital

Cultural and social reproduction has in the 1980s been one of the most important subjects of educational sociology. This emphasis on the relationship between education and social structure originated in analyses of the role played by education in the transmission and preservation of social inequality (Taylor 1984). At the same time education, previously considered as a factor that promotes social mobility, has begun to be discussed as a factor that maintains inequality.

In talking about education and social structure we may distinguish between two types of theory: theories that emphasize the social relations involved in education and theories that emphasize educational contents. As an example of theories that emphasize social relations may be mentioned the one put forward by Bowles and Gintis (1976). An important aspect of the principles of uniformity that are part of their theory is the structural uniformity of education and economic production. They maintain that school places students possessing appropriate skills and attitudes on different levels of the labour force hierarchy and that in this process social relations are more important than teaching contents. Through the social relations operating within the classroom or by means of the hidden curriculum education gives students attitudes and models of action that make them compliant and receptive to the social sanctions of the economy (cf. Broady 1986). In other words, society produces not only goods but also people.

The starting point of theories of economic reproduction is the view that school provides children from different social classes and other social groups with the knowledge and skills that they need in order to be able, in the future, to fill the position allotted to them in a labour force stratified along class, racial and gender lines (Giroux 1981, 1983). According to this view, the function of school is to educate students to accept their position, to make them see it as legitimate. Legitimation takes place partly through the official, partly through the hidden curriculum (Bowles & Gintis 1976).

Bourdieu (1985) sees the school system as an autonomous entity separate from economic and political institutions. Bourdieu uses the concept of symbolic power to describe school's legitimate use of power. Symbolic power is manifested within school as a belief that everyone is being given an equal opportunity and that education will select the right people to occupy the right positions in society's task structure. Even though school is a relatively autonomous institution, it is nevertheless a social product, and it is impossible to understand its social functions.

According to theories of cultural reproduction, the educational system is an aspect of society's symbolic and cultural reproduction processes. At the same time the educational system legitimizes the interests and culture of the dominant social groups by means of abstract symbols such as examination marks and graduation certificates. The influence of social inheritance on school marks is mediated by cultural capital, which also affects students' educational aspirations and attitudes towards school. The school system rewards those who have adopted the right culture, that is, members of the dominant social groups. Simultaneously it makes the selection process appear natural and objective. Bourdieu and Passeron's study (1977) has revealed that education is in a sense a closed system, diminishing educational optimism. Bourdieu sees classes as reflections of habitus. Another concept linked with Bourdieu's theory of reproduction is that of field. Fields are social arrangements that offer rewards. People are recruited from one field to another on the basis of interests. To cross the boundaries of a field an individual must also cross the boundaries of his or her social inheritance or original habitus. Arriving in a new field is a contradictory process that entails both separation and becoming (Järvelä 1985).

Schools constitute a field that more than any other tends to reproduce itself. One of the reasons for this is that agents have control over their own reproduction. Bourdieu defined the family as the key site of cultural determination, where the child is exposed to the values and cultural constructs of his or her habitus. Habitus is a relatively stable system of attitudes and dispositions shaped by the individual's conditions of life and experiences. Habitus produces individual and collective practices in accordance with the schemes generated by history. Bourdieu recognizes that individuals may operate in different types of habitus in different periods of life. (Bourdieu 1984, 1990).

Cultural capital is the vehicle through which background inequalities are translated into differential academic rewards. The cultural capital theory argues that the culture transmitted and rewarded for by the educational system reflects the culture of the dominant class. To acquire cultural capital the student must have the ability to receive and decode it, for schools do not provide their students with the techniques needed for receiving and decoding culture. Consequently, the acquisition of cultural capital depends on the cultural capital transmitted by the family. The higher the social class of the family, the closer the culture it transmits is to the dominant culture (Katsillis & Rubinson 1990). Bourdieu acknowledged that social mobility is also possible, but he viewed individuals as basically passive, fixed in their class stratum because they accept the pervading dominant ideology.

DiMaggio (1982) proposes that cultural capital is an element of status culture distinct from class position. The value of his analysis is twofold. First, the concepts of class and status culture foreground once more the fact that family background is a multidimensional concept. Second, the conception of cultural capital as an indicator of status culture acknowledges that families provide children with assets that increase their chance of educational success independently of class position. School contributes to the reproduction of educational inequality.

The general conclusion of these studies is that school and the family tend to reproduce the social inequalities of the class system prevailing in the larger society. Schools have a hidden curriculum which induces children to accept both their place in society and the assumption that inequalities are natural.

There has been some discussion in Finland (Alapuro 1988) about whether Bourdieu's theory is suitable for studies of cultural capital. Bourdieu's assumptions concerning cultural capital are based on French society and the French university system, which is more selective and hierarchical than the Finnish system. Applications of Bourdieu's theory are not unknown in Finnish research on university education (Aittola 1990; Liljander 1991). According to Liljander, we must not straightforwardly generalize Bourdieu's descriptions of French society to also cover Finnish culture. In Finland the differences between ways of life linked with social groups are not conspicuous, but they may guide children to different educational routes. There are few experiences of whether Bourdieu's theory is applicable to vocational education, an intermediate level in the hierarchy of the school system, and certain reservations are in order.

4 Individualization

Before considering individualization in connection with educational equality and social selection, there is good reason to survey the general discussion about educational policy and to show how individualization is linked with debates on the changes taking place in today's society.

Brown (1990) has analysed the sociohistorical development of British educational policy, describing three waves of ideologies of educational policy. According to him, similar trends have also been discernible in the

USA, Australia and New Zealand. Finnish educational policy has similarly followed such trends, although on a later timetable. Brown's three waves are as follows:

1. The first wave may be described as the educational policy of class society. The education received by students corresponded to their social class; its purpose was to deliver the qualifications that they need if they are to be able to fill their future social positions. Gender was a further differentiating consideration: education was geared to the perceived separate needs not only of bourgeois and working-class children and young people but also of the boys and girls of each social group. Because education was determined by future social position, different groups needed different curricula and often also different schools (cf. Husén 1972). Characteristic of this period's conception of intelligence was a correspondence between talents and social position.
2. The second wave of educational policy may be seen as the ideological background of the comprehensive school. It was derived from the idea of meritocracy: education must be determined on the basis of a child's age, aptitudes and abilities, not on that of his or her birth. Everyone must be given equal opportunities to gain social rewards and positions corresponding to their abilities. The starting point of meritocratic thinking was the assumption that when initial differences caused by social factors are evened down, what is finally left are the authentic differences in ability between individuals. The goal of the comprehensive school was to make education socially equal. By contrast, equality between genders was not seen as a goal at the beginning of the second wave. Only later during the second wave did gender equality attract attention.
3. In the 1990s we are going over to a third wave. The previous ordering principles of education, first class and then ability, have been replaced by market forces. Brown (1990) calls this phase "parentocracy". The dominant feature of educational parentocracy is not how much education a student receives but the social grounds on which educational selections is organized. That is, education is being privatized. It is thought that by opening education to market forces parents will be given greater freedom of choice, ensuring that education is organized on the basis of the interests of the consumers rather than of the providers of education.

The leading motive of today's educational policy is no longer an universalist attempt to secure everyone, regardless of his or her background, equal opportunities to make use of education. Social equality has been replaced by individual equality. Historical development has shown how difficult it is to break. Present-day educational policy is, then, dominated by individualism. The educational system is being deregulated to make way for free competition, in some cases with beneficial results as regards efficiency and functionality (Sulkunen 1993).

Beck (1992, 1994a, 1994b) sees the process of individualization as a specific feature of reflexive modernization. Individualization means firstly the disembedding of the ways of life once characteristic of industrial society and secondly the reembedding of new ones, in which individuals must themselves produce and stage their biographies. Individualization does not occur by chance, nor individually, nor voluntarily, nor through diverse types of historical conditions, but rather all at once and under the general conditions of the welfare state characteristic of the developed industrial labour society. The traditional social and ideological ties of family, class, neighbourhood, church are weakened, which gives the individual a greater freedom of choice and decision. This means that individuals gain greater personal responsibility for planning and organizing their lives, with the result that biographies become more self-reflexive. Individualization is not based on individuals' free decisions but on necessity. Individualization means that customary biography becomes reflexive biography. The individual himself or herself becomes the reproductive unit of the social in the lifeworld.

According to Beck (1994a), the actuality of individualization has been empirically demonstrated in numerous studies. Beck's view of reflexive modernization and individualization is based on German society. In Finland the modernization process seems to manifest itself through different signs. A Finnish survey of the changing social conditions of the young (cf. Lähteenmaa & Siurala 1991) concludes that modernization processes are advancing slowly rather than quickly. Finland was industrialized later than other Western countries. Hence the fact that the postmodern or reflexive modern process has not in Finland progressed as fast as in other European countries. Social background, regional origin and gender remain relatively strong influences on the Finnish socialization process. Educational, choices still reflect these background factors. The turn of modernity weakens collective forms of organization (e.g. political parties, the trade union movement, voluntary associations) while some other features of society (e.g. intergenerational mobility, educational differences) change only slowly, and the levelling of such differences seems likely to be a slow process.

5 Gender equality

5.1 Gender as a question of difference and equality

In discussions about educational equality gender equality is considered a linked issue. Interest has focussed on the one hand on the role played by school, as an institution, in the maintenance and reproduction of gender-based distinctions from one generation to another. On the other hand researchers have asked how the gender relations prevailing in society are manifested at school (Lahelma 1992, 1).

Gender equality may be considered from at least three points of view (Lahelma 1987, 1992; Haataja, Lahelma & Saarnivaara 1989; Hautaniemi, Hernetkoski & Gråsten 1993). The first viewpoint may be called the similarity perspective. From this point of view, equality is seen in terms of women and men's identical rights in family life, working life and politics. In the background of this conception is the idea that women and men are ontologically similar and that what hinders equality from becoming an actual state of things are unjust social structures, values and attitudes.

Secondly equality may refer to the individual's ability to make personal choices and decide about their life guided by factors other than those based on their gender. The idea behind this view is emancipation from gender roles. Biological gender is seen as one among many characteristics, not necessarily linked with the individual's other characteristics and choices.

A third possible view involves arguing that women's experiences should be accepted as being as valuable and valid as men's. In the background is the view that men and women are ontologically different. This conception, where gender differences are emphasized, would put the stress on gaining women's special characteristics a higher status in society's value and rewards hierarchy (cf. the gender system presented by Hirdman 1990).

Lahelma (1992, 28) has classified explanatory theories of gender into, firstly, theories linked with role socialization, secondly, theories derived from reproduction theories and, thirdly, theories based on the concepts of the gender system.

Gender role socialization refers to the whole process of acquiring the knowledge, skills, opinions and attitudes that an individual needs for the development of his or her personal gender identity. Gender identity, again, refers to personal experience, an individual's perception of himself or herself as a man or a woman. Stereotyped conceptions shape girls' and boys' gender socialization so that boys learn among other things that they are winners while girls learn to accept a woman's position and voluntarily make less ambitious choices, as is shown also by this study. The problem involved in the perspective of role socialization is that it does not pay sufficient attention to differences within genders.

Gender differentiation also takes place within the structures, processes and cultures of school. The gender system is present also in school and affects the subjectivities of the people active there. Society's gender-based division of work and power is reproduced partly through the hidden curriculum: students learn that men are important and that women represent otherness. The finding supports the view that the good grades that girls get do not give them immediate access to society's power hierarchies. (Lahelma 1992, 29-30, 42).

Gender may also be considered as reflecting opportunities guaranteed by the social structure (Sampson 1984; Vickers 1984; Kessler, Ashenden, Connell & Dowsett 1985; Acker 1991). Traditional occupational roles also emphasize different values for men and women. Men's job roles tend to foreground competitive ability and result-achieving skills, characteristic of high-status occupations. In women's occupations, by contrast, there is less emphasis on competition and in many countries women belong to the secondary workforce. Women's occupations also lay stress on the ability to interact with people and help others (Eder & Parker 1987).

In social studies gender has been a common subject or background factor. Women's studies initiated views of gender as a theoretical concept (Connell 1987). Gender may firstly be seen as an unproblematic biological characteristic. In research it is treated as an individual variable that divides data into classes. Secondly gender may be an acquired behaviour model, a role. Women's and men's role expectations are different in different societies (cf. the role of the woman in the Nordic countries as compared to some other cultures). A third approach involves a classification principle based on gender orientation. Individuals are classified according to their masculine and feminine characteristics, not according to their gender. Fourthly gender may mean social gender as distinguished from biological sex. Social gender is based on biological gender but gains different attributes in different societies and cultures (Lahelma 1992, 6-7).

Social gender refers to conceptions of women's and men's nature and of behaviour appropriate to each. The term gender system refers to the fact that apart from other considerations the social distribution of power is also linked with gender (Gordon & Lahelma 1989, 1991). The concept of the gender system is used to emphasize that relations between genders are among the fundamental social relations (Liljeström 1986, 88-89).

In analyses of the link between gender and social behaviour the concept of the gender system indicates that in society gender is formed on many levels and that gender is one of the factors that organizes the world. A central feature of the gender system is difference (division) and hierarchy (Hirdman 1990; Rantalaiho 1994). Difference refers to a perception of women and womanhood on the one hand and men and manhood on the other as obviously different. The principle of hierarchy refers to the conception that man or manhood is more valuable than woman or womanhood.

In all societies and at all times we may, according to Hirdman (1988, 1990), distinguish some kind of contract between genders. It manifests itself between individual women and men, in social relations between women and men and in ideologies concerning women and men. A gender contract expresses a way of systematizing different economic, political and social rationalities. The contract must be understood as an invisible relation mediating between women and men. According to Hirdman, the gender contract may be described as the complex reality of men's and women's mutual dependence.

The processes of the gender contract reproduce the logics of division and hierarchy constituting the gender system (cf. Bourdieu's concept of cultural capital). In Hirdman's opinion, women are as fully integrated into the system as are men in their own activities. Women no less than men maintain the prevailing gender system by entering, both in education and in working life, fields typical to women (cf. Nummenmaa & Vanhalakka-Ruoho 1985; Burge & Stenström 1995; Stenström 1995a, 1995b).

The gender contract must be understood as a local and time-bound phenomenon. On the labour market gender contracts vary across different fields and occupations. In industrialized market economies the gender contract is closely tied up with the structures of the labour market. Working life, the family, production and reproduction are institutionally distinct sectors of society, but in the life of an individual they are combined into a whole. In wage labour occupations and job tasks are segregated along gender lines so that both in private life and on the labour market women bear the responsibility for caring work. The gender contract normalizes women's wage labour (Rantalaiho 1994). Studies of segregation should be able to describe the gender contract underlying the prevailing form of segregation, a social arrangement that may be influenced by social policy (Kolehmainen 1992).

Culturally generated conceptions of woman and man are an important factor in the reproduction of gender divisions and segregation. In theories constructed in women's studies inequality is traced back to the internal division of labour in households and to male dominance, which make possible the division of labour and male dominance similarly characteristic of the labour market (Scott 1986; Walby 1986; Beechey 1987; Julkunen 1988; Bradley 1989). According to Walby (1986), segregation is the means by which men control women's work and maintain patriarchal relations on the labour market. A source of new gender divisions is the gender-based division of professions. Women dominate certain semiprofessions (nurses, nursery teachers, social workers).

In women's studies attention has been paid to how various institutions lose status as they are taken over by women. Such a loss of status is not yet evident in education despite the fact that women are in the majority in post-comprehensive-school education. However, there are signs of disquiet as women take over educational fields. Bourdieu (1985, 32) discusses the same subject in a paper without, however, mentioning the subject of gender. A degree that has become an increasingly common possession is devalued, but it is devalued even more when it comes within the reach of people who have no social value.

5.2 Gender equality in education

Analysing the links between education and gender is a field of research that has, in the last two decades, seen a great deal of both theoretical and empirical work in most industrialized countries. Researchers have considered gender as a social category and analysed the function of school in the reproduction and production of the gender system. The gender system is not reflected in school but, rather, school is part of society and the gender system operates at school as much as elsewhere. (Eder & Parker 1987; Gordon & Lahelma 1991).

Reproduction theories of education have been used primarily to analyse relations between social classes, but they have also been applied in investigations of power relations between genders (Berner 1984; Middleton 1984; Barrett 1985; Wolpe 1988).

The purpose of school is to offer all children and youth equal opportunities. Many researchers have suggested that different starting points, such as gender, social background, ethnic origin, affect the way in which a student perceives the knowledge and values presented to him or her. In other words, an educational system that takes no account of human diversity maintains social inequality in ways that makes it appear natural and inescapable. (Hautaniemi, Hernetkoski & Gråsten 1993, 47).

In Finland women's education and training has been seen as an organic aspect of women's social position and equality. Gender equality is not a quantitative problem in Finland. In quantitative terms educational equality between genders has been achieved in the age groups born after the Second World War. When we consider only the number of degrees taken, more men (54%) than women (52%) had taken a degree (Korkeakoulut 1995, 1996, 9). An examination in terms of age reveals that among those aged over 50 men are better educated than women. Correspondingly, among those aged under 50 it is women who are better educated. There are gender-related differences between different levels of the educational system. Women have the upper hand chiefly in secondary education, where men have more often than women completed only the lower secondary school. Women have also finished the general upper secondary shool more often than men (Pöntinen 1989). Women have since the late 1940s been the majority among those holding a Certificate of Matriculation (Koulutus 1993, 100). In vocational education women have the majority on the school and college level, while in vocational higher education and in the polytechnics the majority belongs to men (Ammatillisten oppilaitosten opiskelijat 1993, 1994, 19; Stenström 1995a). Since the middle of the 1970s the majority of undergraduates have been women, while men have been the majority on graduate programmes (Korkeakoulut 1993, 1995, 4).

The differences between women's and men's educational careers are caused not so much by formal differences in educational opportunities as by gender-specific choices. One of the problems involved in gender inequality is the occupation-specific differentiation of vocational education and training, also linked with the differentiation of the labour market (Pöntinen 1990). In other words, the clear differentiation of vocational education along gender lines takes place at the moment when students choose their field of study. Occupational differentiation is a reality even in those study fields where there is an even distribution of women and men.

Table 1 describes Finnish students' choices of fields of study by gender under the system of basic study programmes established in the 1980s. In addition, as a result of the 1995 reform of vocational education some study fields have been combined, as is reflected in the 1995 statistics. In the last ten years more than half the students enrolled at vocational education institutions have been women. It appears that women's proportion was greater in 1990 (54%) than in 1995 (52%). In some male fields such as wood technology, surface treatment, agriculture and forestry the proportion of women has increased at the same time as some female fields such as health care and social services have seen a corresponding increase in the proportion of male students. Textiles industry, previously a mixed field, has become a women's field now when the male-dominated frame fitter programme is no longer part of the study field. Commercial education is one of the female-dominated fields, but in the last few years it seems to have developed in the direction of a mixed field.

A consideration of commercial education in terms of educational levels reveals that the relative proportion of genders differs on different levels of the educational system (Tables 1 and 2).

Table 1. *Proportion of women in vocational education students by field of study in 1985, 1990 and 1995*

Field of study	1985 Women %	1990 Women %	1995 Women %
Men's fields (91-100% male)			
Heat, water and ventilation	1	2	2
Vehicles and transportation	2	5	4
Mechanical engineering	2	4	3
Electrical engineering	5	6	4
Woodworking	5	8	13
Forestry	9	10	12
Male-dominated fields (61-90% male)			
Construction industry	10	10	8
Seafaring	10	11	12
Fishing	12	10	6
Surface treatment	17	30	34
Agriculture	28	34	44
Mixed fields (41-60% either sex)			
Chemical engineering	41	43	42
Printing industry	45	45	38
Textiles industry	49	70	98[1]
Surveying	50	36	22
Dairying	51	51	65[2]
Food processing	60	61	65[2]
Female-dominated fields (61-90% female)			
Commerce and administration	69	70	62
Horticulture	70	73	75
Crafts and design	73	74	71
Hotel and catering services	77	68	65
Women's fields (91-100% female)			
Health care	92	91	88[3]
Social services	94	96	88[3]
Home and institutional economics	99	96	94
Clothing industry	99	98	98[1]
Other fields	77	71	-
All fields	50	54	52

(Ammatilliset oppilaitokset 1986, 1987, 11; Ammatillisten oppilaitosten oppilaiksi otetut ja oppilaat 1990, 1991, 5; Ammatillisten oppilaitosten opiskelijat 1995, 1996, 13)

1, 2, 3 = combined into one field of study

Table 2. *Proportion of women in university students by field of study in 1985, 1990 and 1995*

Field of study	1985 Women %	1990 Women %	1995 Women %
Male-dominated fields (61-90% male)			
Engineering	15	17	18
Mixed fields (41-60% either sex)			
Law	41	47	51
Economics	43	46	44
Natural sciences	43	44	43
Agriculture and forestry	47	49	51
Theology	47	47	54
Theatre and drama	47	51	54
Sport sciences	49	47	50
Music	55	55	56
Social sciences	56	58	61
Medicine	57	56	61
Female-dominated fields (61-90% female)			
Art and design	63	64	63
Dentistry	70	69	70
Education	71	74	80
Psychology	72	75	78
Humanities	76	76	76
Veterinary medicine	76	81	79
Pharmacy	83	83	82
Women's fields (91-100% female)			
Health care	93	95	95
All fields	51	52	53

(Korkeakoulut 1985, 1987, 27; Korkeakouluopiskelijat syyslukukaudella 1990, 2; Korkeakoulut 1993, 1995, 4)

As in vocational education, in the last decade more than half the students in higher education have been women. The proportion of women among university students has increased somewhat: in 1985 the percentage of women in all university students was 51 while in 1991 it was 53. This increase in the relative number of female students seems to have taken place in fields such as law, theology, theatre and drama, education and psychology. By contrast, there has been no increase in the proportion of male students in any study field. In higher education commercial education is among the mixed fields: the male majority among students contrasts with the situation in vocational education, where commercial education is female-dominated. One of the reasons seems to be the vertical differentiation of job tasks in commerce: women are more often assigned routine tasks, men managerial tasks.

An examination of university graduates reveals that in the last ten years the proportion of female graduates has increased on all levels of higher education. In 1995 women took 56 per cent of all completed university degrees. Women tend to be content with lower degrees: women hold 42 per cent of BA degrees, 56 per cent of MA degrees and 42 per cent of higher degrees. Of licentiate degrees 42 per cent have been taken by women, of doctorates 37 per cent (Korkeakoulut 1995, 1996, 13-14). In terms of fields of study the percentage of women among holders of doctorates was highest in the humanities and the aesthetic disciplines, where the overall number of doctoral dissertations is low. The lowest proportions of female doctoral graduates were found in agriculture and forestry and in engineering and the natural sciences (Korkeakoulut 1993, 1995, 4).

Altogether the gender distribution among university students by fields of study seems to have remained stable, in fact more stable than in vocational education. Despite the fact that women have become better educated, the distribution of genders in different fields of study has changed little during the last decade.

5.3 Gender equality in working life

In industrialized countries of the twentieth century, one of the most widespread and persistent features of work is that jobs are gender-typed as women's occupations and men's occupations (West & Zimmerman 1991). This gender-based segregation appears in studies carried out in many countries, and it has proven difficult to break it down. Despite Finnish women's higher educational levels, their position on the labour market is weaker than that of men. According to a study by Pöntinen (1989), women have less chance of gaining managerial positions than men. Not even an average level of education higher than that of men is enough to give women equal occupational opportunities. In addition, now when women have overtaken men in terms of educational levels, upper secondary education certificates and BA degrees have lost some of their importance as labour market resources improving women's chances in relation to men. The reason for this may be the gender-based distribution of students in fields of study, parallelling the similarly gender-based segregation on the labour market.

Segregation is firstly horizontal. Women and men are employed in different fields, and even when they are employed in the same type of industry they in most cases work in different occupations (Nuss & Majka 1983; Walby 1988; Allén 1993). Secondly women's and men's occupational segregation is also vertical. Women are found in executive positions less often than men. Women's weak position in the institution of wage labour is manifested in two ways: on the one hand in their lower positions as compared to men, on the one hand in the lower status of female-dominated fields. Women's weaker position is also seen in their pay.

Two central structural characteristics of postindustrial economies may also contribute to high levels of gender segregation, their large service sectors and their bureaucratic, employee-based class structures. A large service sector means that many female tasks, such as child care and food-related services, have been incorporated into the formal economy. A highly rationalized bureaucratic economy implies a large, hierarchical, functionally differentiated labour market that increases the likelihood of occupationally based distinctions. Research has revealed cross-national similarities in the gender-typing of occupations in that women are usually overrepresented in clerical, sales, and service work while men predominate in production and in managerial occupations. (Charles 1992).

Research findings suggest that women and men tend to see wage labour in different terms (e.g Rantalaiho 1993). It is more characteristic of men to see it as the primary content of their life, with other pursuits such as leisure activities, education and the family subordinated to it. In women's life, by contrast, wage labour and the family are on a more equal footing, in conflict, and wage labour must often yield to the needs of the family.

Another factor are the roots of inequality in households' internal division of labour and male dominance, the source of similar patterns of division of labour and male dominance on the labour market (Scott 1986; Walby 1986; Beechey 1987; Julkunen 1988; Bradley 1989). Women's jobs are a continuation of their functions at home, in the private sphere. By contrast, leadership is a more frequent feature of men's work, as is a link with technology and production (Lahelma 1992, 11).

This process reinforces the structural gender segregation of social positions. Working life and the family are institutionally separated, but in individual lives they are always combined as aspects of daily existence. Occupations and paid jobs are segregated by gender. Women are responsible for social reproduction both in their private lives and on the labour market. In our society the gender system gives women a qualitatively homogenous orientation basis, a reproductive orientation built on a female identity, that is present even in office work. (Rantalaiho 1986, 1993).

Professionalization has been related to power, to various institutional forms of occupational control. Therefore, in view of the differences between male- and female-dominated occupations it might be expected that women's professional jobs would tend to be semi-professional in the sense of lacking complete control of the full range of parameters linked with professionalism (Birkelund 1992).

According to Haavio-Mannila (1990), the gender-based differentiation of occupations in Finland has remained fairly stable since 1950, even though the proportion of women in people in employment has risen. The industrial and occupational structure has changed as the workforce of typical female occupations has grown and that of typical male occupations shrunk. The move to what is termed service and information society has meant the rapid growth of female-dominated occupational groups. Finnish working life is still divided into separate male and female occupational fields, for about a half of all Finnish men and women work in fields where the proportion of those representing the opposite sex in all people employed in the field is less than 10 per cent. This sharp division into male and female occupations is at least partly explained by the voluntary educational choices made by women and men as they choose their future career, in other words by the voluntary reproduction of the gender contract.

The gender-based division of work is seen in the gender structure not only of occupations but also of workplaces. A study of women's work (Haavio-Mannila, Kauppinen-Toropainen & Kandolin 1991) found that men employed in male-dominated occupations and women employed in female-dominated occupations rarely worked with their fellow employees belonging to the opposite sex. The gender-based division of work was reflected in the family, in leisure-time activities and in attitudes to work. Women working in male occupations adopted male customs to a somewhat greater degree that men working in female occupations adopted female customs. Men and women who had crossed gender boundaries in their choice of a career were found to be more egalitarian in their family life and leisure activities than men and women working in occupations typical of their gender.

Finnish working life is characterized on the one hand by gender neutrality and on the other hand by a view of gender as a division between women and men. Such a dichotomizing of women and men is made possible by the circumstance that working life is sharply divided into women's and men's separate fields. This division is also seen in the fact that the public sector employs more women than men and the private sector correspondingly more men than women. A similar gender-based differentiation between the public and the private sector may be seen in commercial and administrative jobs. Under the conditions of a gender-based division of work the gender distinction is reproduced in working life primarily as a distinction between women and men (Kinnunen & Korvajärvi 1996).

Finnish women's studies (Anttonen, Henriksson & Nätkin 1994; Rantalaiho 1994; Kinnunen & Korvajärvi 1996) have paid attention to the specific social preconditions of the Finnish gender system. The roots of our gender system lie in agrarian poverty. In a small and poor country survival and the necessity of coping has produced a comradeship and mutual dependence between women and men that is based on work. When Finland underwent a late and rapid structural change after the Second World War, women were needed as wage labourers. Finland has a long history of women's participation in working life. Finnish women are among the most active participators in working life in the world. In 1996, the proportion of women in the labour force was 48 per cent, the proportion of men 52 per cent (Statistics Finland 1997). The Finns have, on principle, achieved a modern independence by following the same road as men. At the same time as women have as wage labourers gained masculine benefits and independence, the gender contract has also included women's lower pay and male-dominated hierarchies.

III

PURPOSE OF THE STUDY

1 Research task

The purpose of the study is describing social and gender equality in vocational education, particularly in commercial education, and in working life in Finland. The starting point of its consideration of equality are the social selection process on the one hand and reforms of Finnish vocational education on the other. The general challenge of the study was to reflect on educational equality in Finland as a factor in the reforms of vocational education carried out in the 1980s and 1990s and on the link between educational equality/inequality and educational recruitment patterns.

The plans for a reform of Finnish upper secondary vocational education materialised at the end of the 1970s. One of the aims was equality of educational opportunity. Attempts to achieve equality involved among other things an extension of the scope for choice available to students and the establishment of what was termed a two-step selection process, where students first chose a field of study and then, after a year of studies, a specialization line and, simultaneously, the level of their further studies. On the basis of previous research and experiences it was thought that by postponing the choice of study level it would be possible to reduce the influence of social background on students' choice of their fields of study. In other words the aim was equality in terms of the range of options offered by school.

The tasks addressed by the present study originated in this particular school reform. Later they came also to include the Finnish polytechnics reform, an experiment begun in 1992 where the starting point was raising educational levels and increasing flexibility and individual scope for choice. Commercial education was chosen as the focus of the study because it represents one of the biggest fields of vocational education in Finland and also because it qualifies students for many types of job.

The primary task of the study was to examine recruitment for vocational education, particularly as regards equality of educational opportunity, as an aspect of the reforms of commercial education carried out in the 1980s and 1990s. A second task was to examine the transition from vocational education to working life from the point of view of gender equality. Besides commercial education the study was also concerned with other fields of vocational education.

The tasks taken up in the study may be divided into the following subtasks and questions whose answers were sought in the empirical materials collected for the study:

1. *The first task* was to explain how social background and gender affect recruitment for Finnish vocational education, especially for commercial education. The subject was approached from the viewpoint of educational equality as it was manifested in Finnish upper secondary vocational education during its reform in the 1980s and in Finnish higher vocational education during its reform in the 1990s.

a) What was the relationship between students' social background and their educational choices in commercial education during the reform of Finnish upper secondary vocational education in the 1980s?
b) What was the relationship between students' gender and their choices between the various fields of commercial education during the reform of Finnish upper secondary vocational education in the 1980s?
c) What was the relationship between students' family background and their educational preferences in Finnish commercial polytechnics in the 1990s?
d) What was the relationship between students' gender and their educational preferences in Finnish commercial polytechnics in the 1990s?

2. *The second task* was to explain the transition from school to work. The purpose was to give an overview of gender segregation in Finnish vocational education and labour force.

a) How did students' vocational education choices differ in terms of their gender?
b) How did transition from school to work differ in terms of school leavers' gender?
c) How did their choices of occupational fields differ in terms of their gender?
d) The research problem also included a comparison of gender-linked enrolment patterns across selected American and Finnish vocational programmes and across American and Finnish labour force patterns. Are the gender-linked enrolment patterns to be found in

vocational education similar in Finland and the United States? Are gender-related labour force patterns similar in Finland and the United States?

2 Research programme: data and methods

The materials used in the study consist of several sets of empirical data. Two of them were gathered in connection with reforms of Finnish vocational education: one is a follow-up study of the 1980s reform of upper secondary vocational education, the other a follow-up of the polytechnics experiment carried out in the 1990s. In both cases subjects are students in commercial education. These materials have been drawn on mainly for cross-sectional data on students' choices of fields and levels of study. Commercial education enrolment is among the highest in Finnish vocational education, and the proportion of either gender is at least 30 per cent. Other materials belonging to the study are based on vocational education and school-to-work-transition statistics, analysed further for the purposes of the present research. Separate studies demonstrate how differences in social background and gender are reflected in educational and occupational choices.

1. *The first study* was a follow-up of students in commercial education in the 1980s, when a major reform of Finnish vocational education took place. The previous one-step system through which students constructed their study programme was replaced by a two-step system where they first chose their study field and then, after a year of studies, the level of the qualification that they wanted to acquire. The effects of the reform were studied as they manifested themselves in the basic programme in commerce and administration aimed at comprehensive school leavers or those who had not taken the Matriculation Examination. Finnish commercial schools and colleges provide training for many occupations in business, commerce and public administration. School-level programmes take 2 - 3 years and college-level programmes 3 - 4 years to complete. The purpose of the study was to examine how the new organization of commercial education affected educational equality. The viewpoint was that of students' choices of study fields and qualification levels as linked with their social background (Stenström, M-L. 1992. Students' selection in vocational commercial education in Finland. *Scandinavian Journal of Educational Research 36 (2)*, 121-131).

2. *The second study* was based on the same research as the one described above but here the subject is considered from the viewpoint of gender equality in commercial education (Stenström, M-L. 1993b. Gender and equality in commercial education in Finland. *International Journal of Vocational Education and Training 1 (1)*, 15-23).

Data. The first and second studies were based on the data of a sample that included fourteen vocational schools and about 1,800 students. Sixty-five Finnish schools of commerce and administration were divided into four strata, three of them representing three Finnish geographical areas, and one stratum consisting of schools that offered national specialization programmes (some specific vocational education programmes such as data processing or library services are provided only by a few Finnish vocational schools). The data was gathered by using the PPS (probability proportional to size) sampling method.

Table 3. *The number of vocational schools and students and their proportions in the population and the sample*

	Schools				Students			
Stratum	Population		Sample		Population		Sample	
	N	%	N	%	N	%	N	%
Northern Finland	10	15.4	1	7.2	1016	14.0	216	11.6
Central Finland	18	27.7	3	21.4	1813	25.1	384	20.6
Southern Finland	26	40.0	5	35.7	2572	35.6	544	29.1
Schools with special lines	11	16.9	5	35.7	1834	25.3	722	38.7
Total	65	100.0	14	100.0	7235	100.0	1866	100.0

The main research data were collected in a survey carried out in 1984 - 1986 in the different stages of the follow-up study. All questionnaires were sent to the educational institutions included in the sample, where careers officers distributed them to students. Because of the follow-up design not all students remain in the population, as some of them drop out (Stenström, Suovirta & Renko 1988; Stenström 1991a). The actual population of this research are students finishing their introductory year on the basic programme in commerce and administration.

Variables and methods. The first and second studies were based on only a few of the variables operationalized in the research project. The central variable was the target level of education, operationalized as the desired specialization period and measured at the end of the introductory period of the basic programme in commerce and administration. The educational target was a dichotomous variable, school vs. college level, simplifying the actual situation as school-level (lower) further studies include two and college-level further studies eleven different lines. Father's and mother's socioeconomic background was represented by their education and occupation. Parents' educational status was grouped into three categories: elementary school, lower secondary school, and upper secondary school or higher education. Parents' occupational field was a dichotomous variable, commercial or non-commercial occupation.

The results were analysed by using factor analysis and t-tests. Log-linear models were also used to analyse some of the data collected (Kennedy 1988). One way to describe the adequacy of the model is to calculate the odds ratios (cross-product ratios) from the expected frequencies in the log-linear model (Agresti 1984).

3. *The third study* was a part of a follow-up project concerning students in experimental polytechnics in the 1990s (Korhonen & Mäkinen 1994, 1995). The study reported here (Stenström, M-L. 1995b. Polytechnics as a stepping stone to university? A case of commercial education in Finland. *The Journal of Vocational Education Research 20 (4),* 41-58) discusses only commercial polytechnics. The intended purpose of this new component of the Finnish educational structure is to serve as a parallel but occupationally oriented alternative to universities. Polytechnics are not meant to function as an intermediate stage on the road to university. It was therefore interesting to examine how many students planned to continue their studies at university. Another viewpoint involved educational equality as reflected in students' choices of fields of study, while a third perspective was derived from the discussion about the modernization of society. Theories of the turn of modernity assume that as social structures crumble, the link between family background and young people's educational choices will also disappear. Accordingly, one of the aims of the study was to examine, from this point of view, the link between family background and educational preferences in the new school system established in Finland in the 1990s.

Data. The third study was a part of a larger project (Korhonen 1993; Korhonen & Mäkinen 1994) focussing on the polytechnic experiment in Finland, where particular attention was paid to the commercial (n=217), technological (n=151), hotel and catering services (n=151) and crafts and design (n=133) programmes. The data were collected in 1993 from students who had completed a year of studies. The questionnaires were sent to 351 commercial polytechnics students, of which 62 per cent returned them. The vocational colleges examined in the study were situated in the central part of Finland. About half the students lived in municipalities or rural districts without polytechnics.

Students included in the third study concerned with commercial polytechnics represented more than a third of the whole sample. Of the students 70 per cent were female and 30 per cent male. About 25 per cent were 20 years old, a half 21-24 years old and about a quarter 25 years old or over. As regards previous schooling and experience, 38 per cent of subjects came to the polytechnic directly from school (24 per cent from the academic upper secondary school, 14 per cent from other schools), 36 per cent from working life, 6 per cent from the army, while 19 per cent were either unemployed or had been staying at home.

Variables and methods. The independent variables included in the third study were related to students' and their fathers' and mothers' characteristics. Students' characteristics were gender, age, type of domicile and educational background and work experience. Parents' educational status was grouped in the same three categories as in the first and second studies.

The dependent variables examined in this study were students' future educational and employment plans. Study plans were elicited by asking students whether they intended to complete other education after higher vocational education, what kind of jobs they hoped to obtain, and what employment status they expected to achieve in seven years' time. The dependent variables also included students' intentions, if any, to continue their studies on the university level. The Likert-type items comprising the questionnaire were subjected to factor analysis and subsequently used as factor scores. The methods employed in analysing the data included cross-tabulation, t-test, factor analysis and analysis of variance.

4. *The fourth study* is based on Finnish educational and labour market statistics. The aim was to explore students' labour market status five years after the completion of their degree (Stenström, M-L. 1995a. Gender stratification in education and labour force in Finland. In J. Lasonen & M-L. Stenström (eds.) *Contemporary Issues of Occupational Education in Finland.* Institute for Educational Research. University of Jyväskylä, 43-55). The subject was approached from the viewpoint of gender.

The data of the fourth study highlighted the enrolment patterns of Finnish vocational programmes, the transition from school to work and the structure of the Finnish labour force. They are derived from Finnish official statistics and cover the whole of Finland. The paper is based mainly on the follow-up data which Statistics Finland gathered in 1990 on the labour force status of the 1985 school leavers and on the level of their educational qualifications five years later. This paper describes only the data relating to vocational education institution leavers.

5. *The fifth study* is a comparison between Finnish and American vocational programmes in terms of gender (Burge, P. & Stenström, M-L. 1995. Comparison of American and Finnish gender-linked vocational program choices. *International Journal of Vocational Education and Training 3 (1),* 7-24). The aim of the comparison was mapping gender segregation in education and working life in countries with different educational systems and traditionally different patterns of women's participation in working life. The comparison is one of the outcomes of collaboration between the Institute for Educational Research and the Virginia Polytechnic and State University, based on a cooperation agreement concluded by the two institutions.

The fifth study used available data from Finland and the United States. The Finnish data come from Finnish official statistics (Ammatillisten oppilaitosten oppilaiksi otetut ja oppilaat 1990, 1991: Koulutus 1991; Palkkatilasto 1989/1990, 1991; Ammatilliset oppilaitokset syyslukukaudella 1992; Työvoimatilasto 1991, 1992) covering the whole of Finland. They contain information on application for post-compulsory studies and also on the workforce. The comprehensive United States data has been collected by the National Center for Education Statistics and by the U.S. Bureau of Census. Because of the complex problems involved in collecting data related to national enrolment patterns, selected data gathered by individual states, such as Ohio and Virginia, have also been used.

IV

RESULTS

The results discussed below are based on the papers in the background of this study and the materials used in them.

1 Recruitment for vocational education in the reforms of the 1980s and 1990s

The *first task* of the research project was to examine recruitment for vocational education, particularly for commercial education. The problem was viewed in terms of equality of choice in Finnish upper secondary vocational education, reformed in the 1980s, and in the Finnish polytechnics experiment, started in the 1990s. Attention was focussed on differences linked with social background and gender. The results will also be considered against the background of Finnish reforms of vocational education and the debates over educational equality that lie behind them, debates where we may see a shift from social mobility to social reproduction and, as an aspect of the turn of modernity, to the problematics of individualization.

1.1 Effect of social background on students' educational choices in upper secondary commercial education

The research reported here covered the basic programme in commerce and administration, aimed at those who come from comprehensive schools. More than half of those who began the basic programme in commerce and administration had come straight from the comprehensive school, while a little less than half had completed their basic education earlier. Most of the students (91%) had made the basic programme in commerce and administration their first option. A little less than a third of the students were boys and more than two thirds girls. The students had done passably well at school; those who had done very well had gone to the academic upper secondary school. More than half of the entrants had finished their basic education with a fair average grade (an average grade between 7 and 8 on a 4-10 scale), more than a quarter had an average grade above 8 and a little less than a fifth an average grade below 7 (Stenström 1991b, 1992).

Among the starting points of the reform of Finnish upper secondary vocational education carried out in the 1980s was a belief in educational equality and social mobility. In research this meant considering educational equality in terms of the classic (meritocratic) conception by standardizing school success and then examining the effect of parents' background on their children's educational choices. At the same time there was criticism of the educational selection process. According to Bourdieu (1977), cultural capital becomes an important intervening variable as a society's demands for equality of opportunity and meritocratic selection increase.

Previous studies have shown that there is a link between parents' education and social status and their children's achievements at school. According to Swedish Ekerwald (1983), parents' social status affects children's upbringing and, among other things, attitudes towards school and thus indirectly their school success. Contrary to what is the case for instance in the comprehensive school, the study reported here (Stenström 1991b; 1992) found a negative link between parents' basic education and their children's success in vocational basic education. Children of less-educated parents were more successful in vocational education than children of better-educated parents. This indicates that among children of parents with lower educational levels it is those who were more successful and among children of better-educated parents those who were less successful at the comprehensive school who go to institutions of commercial education and to other vocational education establishments. The reason why the link between children's school success and parents' educational level was negative was that successful children of better-educated parents go to the academic upper secondary school. Thus the population came from a specific background not representative of the age group as a whole.

The purpose of the study was, then, to investigate the link between cultural capital and social reproduction, specifically the connection between parents' education and occupation and their children's level of education. There was a clear link between father's basic education and child's educational level in that, despite the reverse relationship between a child's success in vocational education and father's basic education, children of better-educated fathers (87%) had applied to college-level studies more often than children of less-educated fathers (65%). By contrast, there was no statistically significant difference between mother's basic education and child's educational level, even if the trend was similar to that found in the case of father's basic education. There was also a link between father's occupation and child's educational level: children of fathers employed in the commercial sector (70%) and in sectors (70%) other than industry (64%) applied more often to college-level studies.

The results were analysed mainly with a log-linear model. The odds ratios calculated from the expected frequencies in the model revealed that there was a clear link between father's basic education and student's educational levels. Students whose fathers had completed the lower secondary school applied to the college level twice (2.0) as often as students whose fathers had not gone beyond the elementary school. Students whose fathers were upper-secondary-school graduates applied to college-level studies almost six times (5.9) as often as students whose fathers had only completed the elementary school. This result was valid regardless of how successful students had been in the introductory phase of the basic commercial and administrative programme. By contrast, there was no statistically significant association between students' educational preferences and mothers' education.

The findings support the theory of cultural capital in that there seems to be a link between parents' education and their children's choice of educational level in upper secondary commercial education. For Bourdieu (1984, 318; 1990, 12) the class struggle is waged in a social field where people accumulate the kind of capital valuable in each given field. To enter a field an individual must have specific qualifications. In this case valuable capital seemed to come from parents' secondary or higher education and their commercial occupation. It also seemed to hold good that crossing the boundaries of such fields is more difficult to those from farther away, in this case to children of parents who had only completed elementary school. Children of better-educated parents did not need to surpass their social inheritance. The battle for the social field that here serves as a theatre of the class struggle is not competition for the highest positions in the hierarchy but instead the results describe a competition for positions in a field located on its middle levels.

There is no straightforward causal link between an individual's social background and his or her educational choices. What happens instead is that the school system contributes to the symbolic and cultural reproduction of society by reproducing society's hierarchical structures by means of abstract symbols, such as grades and certificates. The school system rewards those who have adopted the right kind of culture. The findings of the present study seem to imply that the hidden curriculum (e.g. Broady 1986) socializes students possessing more cultural capital into commercial studies better than it socializes other students. Children with white-collar and commercial background are best socialized into such studies. In terms of closure theory, school-level studies are open to all students, while college-level studies tend to be favoured by students with parents employed in commercial occupations.

1.2 Effect of gender on students' educational choices in upper secondary commercial education

Another current focus of vocational education in Finland has been gender equality, a field where some progress has been made. The data already used in the above discussion about the influence of social background was also the basis for investigating the link between gender and recruitment for upper secondary commercial education. The link between school success and gender seemed to reflect the generally noted trend that girls were more successful in basic education than boys. By contrast, no statistically significant gender-related differences in study success were found during the first year (introductory studies) in commercial education, even if girls tended to progress in their introductory studies better than boys.

The main finding of this research was that men and women chose different levels of education. The results showed that school-level applicants were more often women than men while those who sought admission to the college level were, on the contrary, more often men than women. The results of log-linear models, especially the odds ratios, indicated that men sought admission to college-level studies almost three times (2.9) as often as women irrespective of how well they had succeeded in their first year. Despite their lower school achievement men ventured to apply to a higher educational level than women. An explanation might be that men came from better-educated families (families with more cultural capital) than women (cf. Hermunen 1984, 23). Further, male and female students chose different specialization lines. Men favoured marketing, accounting and sales. Marketing was most popular also among women, followed by office technology, sales and accounting. Women seemed to consider a broader range of lines than men. The results of the study also indicated that there was a gender contract that women maintained by making traditional choices. The results reveal that the educational choices made by women and men in commercial and administrative education are differentiated along both vertical and horizontal lines and that such divisions are further reinforced in working life.

The study also attempted to find out what kinds of factor students emphasized when they made their occupational choice. Again men and women seemed to differ. The results showed that men valued the high status of their chosen occupation whereas women valued the opportunity to work with people. On the other hand, female students paid more attention to working conditions. Furthermore, male students considered career prospects and independent work important, while female students emphasized the chance to work with people and their desire to help them.

Students were further asked what kinds of factor affected their choice of specialization line most. Their answers revealed that there were gender differences in the factors influencing students' choice of programme and specialization line. Thus, in choosing their programme men seemed to give much more consideration to salary, career and prestige than women, and men also emphasized the importance of aptitude for the field they chose.

Rantalaiho's (1986) suggestion that office work gives women a shared orientation basis, a reproductive orientation based on a female identity, may partly explain why women applying to commercial education mention, in this study, a wish to help others and work among people as the motivation for their career choice. The finding is also consonant with Gilligan's (1979) proposal that women's and men's identities develop in different ways. Women tend to define themselves through their relationships with others, while men follow traditional masculine lines of self-definition.

Finally, the present research showed that while institutions of commercial education were attended both by women and men, they served them in different ways. For men commercial colleges were a substitute for the upper secondary school more often than for women. That is, men seemed to be guided by more instrumental considerations than women. In Finland the upper secondary school is the main route to academic studies. Because male students' achievement in the comprehensive school was lower than that of female students, male comprehensive school leavers found it more difficult to gain entry to the upper secondary school than female school-leavers. An alternative educational pathway was offered by commercial colleges, which were close to upper secondary education.

1.3 *Effect of social background on students' educational plans in commercial polytechnics*

Among the starting points of the Finnish polytechnics system created in the 1990s are raising the educational level of the age group, meeting changing expertise and skills requirements and making vocational education more attractive. The goals of the polytechnics reform, increasing the use of individual-centred approaches and extending individual choice, seem to mark the beginning of thinking stemming from the turn of modernity in Finnish school reforms. Educational equality, by contrast, received little attention when the polytechnics system was being created.

The question of academic drift was interesting from the standpoint of educational equality because the very idea of the polytechnics was that they are not to serve as a roundabout way to university but instead the reform was intended to establish a comparable alternative to attract young people with an interest in higher education. The results of the study showed that over half (67%) of students in commercial polytechnics planned to continue their studies. Almost half of them (47%) intended to apply to university. Over half the students who planned to attend university said that they were going to apply to a school of economics or to a university offering a degree programme in economics. That is, they were going to continue their studies in the same subject but on a higher level. A little less than 25 per cent planned to apply to study social sciences, 7 per cent languages, 4 per cent to train as teachers and 2 per cent as graduate engineers, and 2 per cent to read education. Overall, students' intentions to take up further studies seemed to be very firm although the polytechnics focus primarily on preparation for employment.

A possible explanation is that subjects had only one year of studies behind them and that their goals were consequently not yet clear. However, further findings (Korhonen & Mäkinen 1995) indicated that academic drift was still very strong among polytechnic students at the end of their studies. Over half (51%) of commercial polytechnic students planned to continue their studies at university. The other possible explanation is that students saw university-level education at the outset as an appealing alternative to the polytechnics (23%).

A significant question was who were the students who would like to continue their studies and especially to go to university. It was students whose mothers had completed the lower secondary school who were most eager to continue their studies after polytechnics. This result expressed only a general desire to continue in education.

Students were asked about the reasons why they were interested in continuing their studies. The results indicated that the most important reason was a student's desire to improve his or her job opportunities. In 1993 this was a very understandable motive because of the high unemployment rate (17.9% in 1993, 18.4% in 1994 and 17.2% in 1995) in Finland (Suomen tilastollinen vuosikirja 1996, 334). The second most important reason given by students was improving their qualifications.

An analysis of students' plans to continue their studies at a university revealed a relationship with father's education. Students with fathers who had completed the elementary school or the upper secondary school or higher education were less likely to apply to university than students whose fathers had completed lower secondary school. There seemed to be a relationship between father's education and the type of higher education to which students intended to apply. Students whose fathers had graduated from the upper secondary school or completed higher education were more likely to apply to a school of economics and administration or a university with an economics degree programme than students with fathers who had only completed the elementary school.

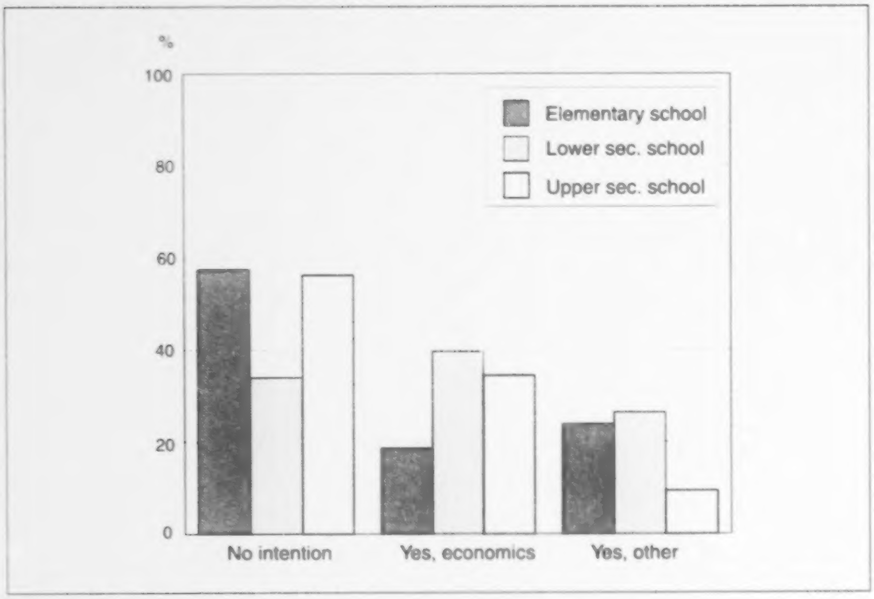

Figure 4. *Effect of fathers' education on students' plans to apply to higher education*

Relating students' intention of applying to university to their fathers' education yielded at least two distinct patterns. First, students with low- or high-status family background thought of university less commonly than others, whereas students whose fathers had a lower-secondary-school education were most eager to apply to university. Second, students with a high-status family background were more interested in studying economics at university. Especially high-status students seemed to see polytechnics as an indirect route to a university-level economics programme. This finding is consonant with those of a study of community college in America (Lee & Frank 1990) and to some extent with the theory of cultural capital.

The influence of family background varied to a statistically significant degree depending on the type of studies planned, that is, on whether the student had a general intention to continue his or her studies or specifically planned to carry them on at university. Mother's education had a statistically significant relationship with a general intention to continue studies in that it was children of what are termed middle-class mothers who were most interested in continuing their studies. There was a parallel relationship between father's education and children's educational preferences, even if it was not statistically significant. By contrast, there was a statistically significant link between father's education and specific plans for further studies at university. A parallel link also existed between mother's education and student's choice of educational level, but it was not statistically significant. It is accordingly possible to conclude that father's education was more clearly related to the social status of the planned studies while mother's education was important as an influence on a general intention to take up further studies. In any case it seemed that family background still affected students' educational plans. Thus, the results of the present research did not parallel the discussion on the turn of modernity, where the structures of society have been expected to weaken or even break down (cf. Beck 1992; Ziehe 1991).

Another research question dealt with the relationship between family background and students' future employment plans involving an examination of their immediate and long-term plans for their future employment. The results showed that there were two kinds of relationship between family background and student's employment plans. First, father's occupation seemed to have greater impact on a student's employment plans than father's education, whereas it was father's education rather than his occupation that seemed to be the more important influence on a student's educational plans. Second, mother's occupation was linked with the job a student expected to have in the near future, but not with the status of the anticipated job. This finding might also indicate that father's education or occupation influences the status of a student's educational choice, whereas mother's education or occupation influences a general interest in further studies.

In conclusion, the results of the present study of polytechnic students' educational plans showed that family background (cultural capital) influenced students' intention to apply to university. Because those who had gained admission to vocational education came from what are termed the lower and middle classes, the association between family background and an intention to engage in university studies was nonlinear. Middle-class students were most willing to continue their studies at university. For students of middle or high status the polytechnic seems to have served as an intermediate stage on their road to university. The finding supports the view that the middle class sees education as a route enabling the acquisition of personal and individual relative advantage on the labour market. Representatives of the working class educate themselves to secure employment and gain sufficient general qualifications for paid work (cf. Järvelä 1993).

A further question to be addressed in the study was whether Finnish students' educational choices show signs of a turn to modern or postmodern behaviour patterns. In this connection signs of a crisis of modernity were sought in the link between social background on the one hand and educational choices and their reasons on the other. There were few or no signs of the supposed central process of postmodern society, individualization. It is true that the study focussed exclusively on examining the link between students' social background and their willingness to engage in further studies, making it impossible to consider other factors connected with the turn of modernity.

1.4 Effect of gender on students' educational plans in commercial polytechnics

Polytechnic students' general intentions to continue their studies and specific plans for further studies at university did not differ according to gender, for 70 per cent of both men and women planned to apply to university. This finding differs from the results concerning the upper secondary education reform, where it was found that boys were more inclined to apply to college-level studies than girls. Similarly, again unlike in upper secondary commercial education, there were no significant differences in parents' education according to students' gender. In other words, polytechnics seemed to attract girls and boys with similar background. A possible explanation is that the sample was small (n=217) and, in terms of gender, partly biased for it, gender distribution was 30% male and 70% female. Commercial education is one of the fields of vocational education in Finland where gender distribution is divided, but no more so than within any other study field. In general, as regards the relationship between gender and educational preferences, female students seem to be more interested in continuing their studies than male students.

It was interesting to discover that there was no statistically significant link between students' gender and their educational choices. Furthermore, the results concerning the relationship between gender and future employment plans showed that there were no gender-related differences. Men and women did not differ in the nature and status of the jobs that they expected to obtain immediately after their graduation or seven years later. The results did reveal, however, that men planned to establish an enterprise of their own (28%) and expected in the long run to work in management-level jobs (30%) more often than did women (17%, 18%). The differences did not achieve statistical significance.

2 Transition from school to work

2.1 Employment and further education patterns by gender

The *second task* of the study was charting vocational education institution leavers' transition from vocational education to the labour market, which is one of the central phases in the social selection process and which may also be seen as one of the criteria of educational equality. As an institution school qualifies students for the labour market, a necessary mediating link between education and working life. Finding employment depends, apart from individuals' educational level and study field and the employment situation prevailing in their occupational field, on their gender. The study focussed on gender-related school-to-work transition and further education patterns. The results were analysed on the basis of official statistics. Below, school-to-work transition will first be considered generally as an aspect of upper secondary vocational education, after which the study will focus on the specific features of transition from commercial and administrative education to working life.

Statistics Finland gathered in 1990 a set of statistics on vocational education institution leavers that described employment and further education patterns five years after graduation among those who had gained their qualification in 1985 (Koulusta työelämään 1993). The data covered leavers of all the different levels of the Finnish educational system, of which only vocational institution leavers are discussed here. Their gender-related further education patterns will be examined first. Study fields, based on the Finnish system of basic programmes, have been divided into men's, male-dominated, mixed, female-dominated and women's fields according to gender distribution among students. Further studies were classified on the basis of the study-field and study-level classification used by Statistics Finland (Koulusta työelämään 1993).

The results (Table 4) revealed that 79 per cent of those who had completed a basic vocational programme had the same certificate five years after their graduation and that 21 per cent had taken a further qualification. Women (25%) had taken a further qualification more often than men (16%). Women had continued their studies on the same level of studies more often than men, while men had been more often interested in studies in the same field but on a different level, that is, in taking a college-level certificate to complement their previous school-level qualification. Women seemed to have been most interested in further studies if they had graduated from male-dominated and women's fields and least interested in them if they had graduated from female-dominated fields, one of which is commercial education. Women also seemed more predisposed to change study fields. Female vocational education institution leavers had taken a different qualification irrespective of whether they had studied at the same educational level as or at a different level from men. The reason might be that the economic recession of the early 1990s caused a rapid increase in unemployment rate in Finland. The recession mainly affected male-dominated industries. Later its effects have centred on female-dominated and women's industries.

This section will focus on those students who graduated from the basic programme in commerce and administration in 1985. Their further studies display a tendency different from the general gender-related trend in vocational education described above. Women who had completed the basic programme in commerce and administration had engaged in further studies less often than men. Both on the school (77%) and the college (93%) level, female graduates' qualifications had remained the same more often that male graduates' qualifications (75% and 91% respectively). Those who had continued their studies had in most cases taken a certificate in the same field but on a different level of studies, which in this case meant acquiring a commercial college qualification (the *merkonomi* certificate) in addition to a previous commercial school qualification (the *merkantti* certificate). Male commercial school leavers (17%) had taken the higher certificate more often than female leavers (14%). Women (6%) had in their turn taken a school-level qualification in a different study field more often than men (3%). Altogether further education statistics confirm the view that women's careers typically advance horizontally while men characteristically seek vertical advancement.

Table 4. *Vocational qualification of female and male vocational education institution leavers five years later*

	Qualification 1990					
Field of study 1985	Same	Same level and field	Different Same level, different field	Different level and field	Different level, same field	Total
	%	%	%	%	%	N
Men's fields						
(91-100% male)	83.0	6.2	3.1	2.2	5.5	16382
Women	77.5	2.8	6.5	7.1	6.1	507
Men	83.2	6.3	2.9	2.1	5.5	15875
Male-dominated						
(61-90% male)	83.5	3.4	5.1	3.1	4.9	6549
Women	69.1	5.6	12.1	6.6	6.6	1293
Men	87.0	2.8	3.4	2.3	4.5	5256
Mixed						
(41-60% either sex)	82.9	5.4	4.0	4.7	3.0	1625
Women	83.1	4.2	3.0	7.1	2.6	793
Men	85.1	6.0	1.4	3.9	3.6	832
Female-dominated						
(61-90% female)	82.3	6.1	3.9	3.5	4.2	20531
Women	81.6	5.8	4.6	3.7	4.3	15173
Men	84.1	6.9	2.5	2.6	3.9	5358
Women's fields						
(91-100% female)	68.7	8.9	12.2	7.9	2.3	17273
Women	68.0	9.0	12.6	8.1	2.3	16495
Men	84.2	6.7	2.3	3.6	3.2	778
Total	78.8	7.0	5.9	4.3	4.0	62360
Women	75.0	7.1	8.6	6.0	3.3	34261
Men	83.2	6.8	2.8	2.3	4.9	28099

Table 5 describes vocational education institution leavers' school-to-work transition in terms of their chief activity. Chief activity five years after graduation was divided into employment, unemployment and other activities, the last category also covering studying.

Table 5. *Activities of female and male vocational education institution leavers five years later*

	Activity 1990					
	Employed		Unemployed		Other *)	
Field of study 1985	F %	M %	F %	M %	F %	M %
Men's fields (91-100%male)	83.5	85.3	3.0	6.4	13.5	8.3
Heat, water and ventilation	90.0	87.3	10.0	5.2	0.0	7.5
Vehicles and transportation	84.6	86.5	5.1	6.5	10.3	7.0
Mechanical engineering	86.1	85.0	1.0	7.8	12.9	7.2
Woodworking	66.7	84.2	11.1	7.2	22.2	8.6
Electrical engineering	84.7	85.9	1.1	4.4	14.2	9.7
Forestry and wood industry	78.8	80.6	9.1	7.2	12.1	12.2
Male-dominated (61-90% male)	79.4	84.3	2.3	8.1	18.3	7.6
Construction industry	83.8	82.2	2.2	11.0	14.0	6.8
Seafaring	69.0	74.4	6.9	9.4	24.1	16.2
Fishing	80.0	95.8	0.0	0.0	20.0	4.2
Surface treatment	66.7	77.2	13.9	16.8	19.4	6.0
Agriculture	78.7	89.2	1.4	2.9	19.9	7.9
Textiles industry	75.0	90.9	0.0	9.1	25.0	0.0
Mixed (41-60% either sex)	82.2	89.2	3.2	4.4	14.6	6.4
Printing industry	81.7	90.9	2.8	1.6	15.5	7.5
Chemical engineering	80.9	88.0	2.5	5.9	16.6	6.1
Dairying	95.2	96.1	0.0	3.9	4.8	0.0
Surveying	85.4	89.9	6.8	2.9	7.8	7.2
Female-dominated (61-90% female)	80.5	88.3	4.4	3.9	15.1	7.8
Commerce and administration	84.3	90.0	3.7	2.8	12.0	7.2
Crafts and design	67.2	81.1	5.2	7.9	27.6	11.0
Horticulture	74.3	81.8	4.6	6.7	21.1	11.5
Food processing	80.6	91.0	1.9	4.5	17.5	4.5
Hotel and catering services	74.4	85.9	6.3	5.6	19.3	8.5
Women's fields (91-100% female)	78.7	91.0	2.1	1.2	19.2	7.8
Health care	75.0	90.9	0.0	9.1	25.0	0.0
Social services	82.9	94.9	0.9	0.0	16.2	5.1
Clothing industry	72.3	84.2	5.7	5.3	22.0	10.5
Home and institutional economics	67.8	70.0	5.3	10.0	26.9	20.0

* chiefly studying

(Koulusta työelämään 1993, 151-152)

Men (86%) were in employment more often than women (80%) irrespective of the vocational programmes that they had completed. A comparison of employment patterns among representatives of different study fields (men's, male-dominated, mixed, female-dominated, women's fields) shows that men who had graduated from women's, female-dominated or mixed fields had found employment more often than men who had graduated from men's or male-dominated fields. A similar trend was seen among women, though it was not as clear as among men. Women who had graduated from men's and mixed fields were in employment more often than women who had graduated from women's or male-dominated fields. Those who had graduated from what are known as non-traditional fields had been most successful in finding jobs.

Men (6%) were unemployed more often than women (3%). The greatest number of unemployed men were found among those who had graduated from male-dominated and men's fields. Among women the greatest number of unemployed people were among those who had graduated from female-dominated and mixed fields. This describes the situation in the early 1990s, when Finnish unemployment figures were lower than in the second half of the decade.

Among those who had completed the basic programme in commerce and administration men were in employment more often than women, which was typical of female-dominated fields. In this respect school-to-work transition among commercial college graduates does not deviate from the general trend. Both in vocational education in general and among commercial college leavers in particular school-level graduates (6%) were unemployed more often than college-level graduates (3%).

As regards other activities, which includes studying, women were more active than men. Women who had graduated from women's and male-dominated study fields were more active than other women, while among men levels of other activities were fairly constant when study fields were considered from a general point of view.

What follows is a more detailed discussion of school-to-work transition in terms of industry, occupational field and socioeconomic status. In terms of industry, most (68%) vocational education graduates worked in the service sector, a little less than a quarter in the processing industry and 6 per cent in primary production (Koulusta työelämään 1993, 58-59). Women (81%) were employed in service industries more often than men (51%), men (37%) more often than women (23%) in processing industry (industrial occupational fields).

Those who had completed the basic programme in commerce and administration found employment most often in the service sector (63%) while more than a quarter had found a job in the processing industry and 6 per cent in primary production. In terms of occupational fields female and male graduates from the basic programme in commerce and administration seemed to enter different sections of working life. Female graduates found employment in administrative and office technological fields, while the majority of male graduates worked in commerce. Female commercial college graduates (*merkonomi*) were found in administrative and office technological fields more often than female commercial school graduates (*merkantti*). Among men there seemed to be a more even distribution of people employed in administrative or office technological jobs (Koulusta työelämään 1993, 102).

The following examination of the socioeconomic status of employees concerns people who were wage-earners in 1990 and who five years after their graduation had unchanged educational qualifications (Appendix 2). Socioeconomic status was determined on the basis of an employee's occupation, comprising upper-level white-collar workers, lower-level white-collar workers and blue-collar workers. The category "others" covered those wage-earners whose occupation was unknown (Koulusta työelämään 1993, 21).

Table 6. *Socioeconomic background of female and male vocational education institution leavers five years later*

	Socioeconomic background				
Educational level	Upper-level white-collar workers %	Lower-level white-collar workers %	Blue-collar workers %	Others %	Total N
All vocational education institutions	11.8	49.3	37.8	1.1	39982
Women	8.5	68.9	21.6	1.0	19982
Men	15.1	29.6	54.0	1.3	20000
School-level	2.7	35.6	60.3	1.4	23176
Woman	3.8	59.1	35.7	1.4	10655
Men	1.8	15.4	81.3	1.5	12521
College-level	14.4	77.2	7.7	0.7	14549
Women	10.7	83.0	5.7	0.6	8932
Men	20.2	67.9	11.0	0.9	5617
Commerce and administration	14.2	75.6	9.2	1.0	9190
Women	8.8	84.3	6.1	0.8	6621
Men	28.2	53.1	17.2	1.5	2569
School-level	5.4	74.4	18.9	1.3	1749
Woman	3.4	82.7	12.9	1.0	1297
Men	11.3	50.4	36.3	2.0	452
College-level	16.3	75.9	6.9	0.9	7441
Women	10.1	84.7	4.5	0.7	5324
Men	31.8	53.7	13.1	1.4	2117

(Koulusta työelämään 1993, PC-AXIS Statistics)

Five years after their graduation, upper secondary vocational education institution leavers belonged in most cases to lower-level white-collar workers (49%) and blue-collar workers (38%), less often to upper-level white-collar workers (12%) and to the category of others (1%). There were differences in working in different socioeconomic tasks linked with educational level and gender. Vocational school graduates were most often found in blue-collar jobs (60%), more than a third among lower-level white-collar workers, 3 per cent among upper-level white-collar workers and 1 per cent in the category of others. Vocational college graduates found their occupation most often among lower-level white-collar workers (77%), 14 per cent among upper-level white-collar workers, 8 per cent among blue-collar workers, while 1 per cent belonged to the category of others. Male school leavers (81%) were most often found among blue-collar workers, while most female leavers (59%) were classified among lower-level white-collar workers. Male college graduates in their turn were more often than women employed in higher positions: 20 per cent of men and 11 per cent of women were upper-level white-collar workers.

Students who had graduated from the basic programme in commerce and administration represented above-average socioeconomic status as compared to vocational education institution leavers in general. Of graduates from the basic programme in commerce and administration who had found a job, 76 per cent were lower-level white-collar workers, 14 per cent upper-level white-collar workers and 9 per cent blue-collar workers while 1 per cent belonged to the category of others. That is, their status was comparable with that of commercial college graduates, a situation explained by the fact that in the commercial field college-level graduates represented the majority. There were differences between women and men. Among school-level graduates, women were lower-level white-collar workers more often than men while men were manual workers more often than women (36 per cent of men and 13 per cent of women were blue-collar workers). Correspondingly, among college-level graduates men (32%) were upper-level white-collar workers more often than women (10%); even women with college-level qualifications worked as lower-level white-collar workers more often than men.

Figure 5 examines, on the basis of socioeconomic status, how successful vocational college leavers have been in finding employment compatible with their qualifications. College-level graduates' status is interpreted as compatible with their qualifications when they are lower-level white-collar workers, while if they are upper-level white-collar workers they are considered to have achieved a status above their qualifications and if they are blue-collar workers their status is considered to be below their qualifications.

The employment patterns found among commercial college leavers were compatible with the socioeconomic status of college-level vocational education leavers in general. However, male commercial college graduates

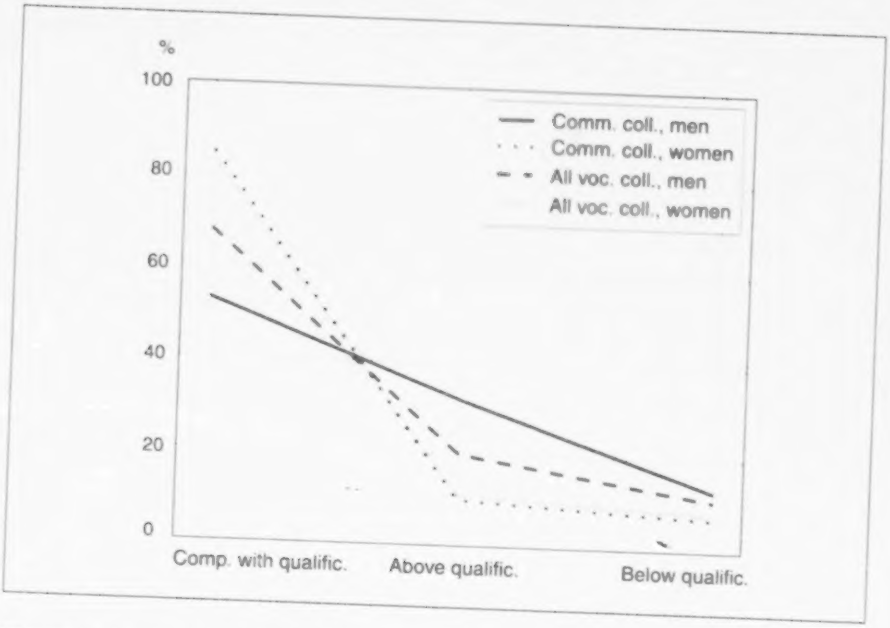

Figure 5. *Socioeconomic status of vocational college leavers five years later*

worked as upper-level white-collar workers more often than was the average. This may partly explain why men applied to college-level studies in commerce and administration more often than women and used commercial education institutions as a route to higher positions alternative to the general upper secondary school. Even though the link between family background and school-to-work transition was not examined here, previous studies (Hermunen, 1984; Stenström 1991b) have shown that the educational background of parents of male students on the basic programme in commerce and administration was higher and their occupational field commercial more often than was the case among parents of female students. As earlier findings (Stenström 1991b, 175) also indicate that in commercial and administrative education women succeeded better than men both on the school and on the college level, it may be assumed that men's higher cultural capital has been one of the factors that have helped them to achieve a status higher than what was warranted by their educational qualifications as such.

In conclusion, Finnish statistics indicated that vocational education often follows the gender-segregated patterns of the labour force. The segregation of men and women at work occurred along many dimensions. The Finnish labour market was seen to have two different labour forces. Women worked chiefly in social and personal services, whereas men's areas were industry-related. A basic feature of gender-based divisions in occupations and on the labour market is that women are chiefly engaged in work that involves other people and their immediate well-being and maintenance. Women and men worked in different fields and, even within the same field, in different positions. Despite women's qualifications and their participation in working life, their position on the labour market is not equal to that of men.

2.2 A comparison of Finnish and American educational and occupational choices

A part of the second task of the study was a comparison of the gender-linked enrolment patterns of selected Finnish and American vocational programmes and of Finnish and American labour force patterns. Only study fields were compared on the basis of available statistics, while educational levels were left out of consideration. The vocational programmes chosen for comparison (agriculture, commerce (business), health care, home economics and industrial education) were selected because of the similarity of their curricula in each country. The focus of interest were gender-related differences in study programmes and in sectors of working life in two countries with different traditions of women's participation in working life.

Finnish women have a relatively strong position and a long tradition of being active in working life. In 1991, the proportion of women in the Finnish labour force was 72%, while in the United States 58% of all women worked outside their homes. In 1993, women made up about 49% of the total number of those employed in Finland, and 47% of the total number of those employed in the USA (Burge & Stenström 1995; Suomen tilastollinen vuosikirja 1996, 332).

The comparison of the United States and Finland showed that in both countries upper-secondary-level vocational education enrolment has followed gender-stereotyped lines as regards students' choice of programme. Female-dominated fields included commerce (business), health and home economics while technical and industrial programmes and agriculture were male-dominated fields in both countries.

A comparison of gender-related enrolment patterns in commercial education in the two countries revealed that in the USA commercial education was divided into two different programmes, business and marketing. The programme in marketing seemed to have been favoured by male students while gender distribution among students of business seemed to vary across different states. In Finland upper secondary commercial education comprised a single basic programme divided into different specialization lines, one of which was marketing, more popular with men than women.

Both the Finnish and the US employment figures showed gender-linked patterns. Similar gender-linked patterns were also in evidence in

Table 7. *Fields of vocational education chosen by male and female Finnish and American students in 1993*

Study fields	Finland	United States
Male-dominated (61-90% male)	Technology, industry Agriculture, forestry	Agriculture Trade and industry Technology
Female-dominated (61-90% female)	Commerce (Business)	Marketing Business Home economics
Women's fields (91-100% female)	Health care Home economics	Health care

(Burge & Stenström 1995)

different sectors of working life. Women were engaged chiefly in services and in office work, whereas men showed preference for the industry-related fields of engineering and electronics. Women train for service occupations while men study production and technical fields.

Women's weaker position in the labour force was also manifested in their salaries, as was revealed by comparisons of average pay per hour made in some occupational fields. Women's wages and salaries were lower both in industrial and in service and clerical work. An overview of wages paid in male- and female-dominated occupations indicated that not only were women grouped in similar occupational categories in the two countries, but both in Finland and in the United States pay was lower in female-dominated than in male-dominated fields. In both countries, in every occupational category linked with the fields compared women were paid less than the men employed in the same fields (Burge & Stenström 1995).

In conclusion, gender-linked occupational choices and labour force patterns in the two countries were very similar, although the societies, cultures and educational systems differ in some ways. Finland is a small country with a homogenous population, whereas the United States is a large country with a heterogenous population and different states. Therefore, a complete comparison between these countries was very difficult to carry out, and the findings of the present comparison were only suggestive. However, they did indicate that differences between female and male

Table 8. *Men's and women's employment by selected occupations in Finland and in the United States*

	Finland	United States
Men's fields (91-100% male)	Electricians Mechanicians Technicians / engineering	Mechanicians Engineers Electricians
Male-dominated (61-90% male)	Sales representatives Computer programmers Farming, fishing, forestry	Police and detective Farming, fishing, forestry Technicians/engineering Sales representatives Computer programmers
Female-dominated (61-90% female)	Primary-school teachers Textile industry	Office clerks Primary-school teachers
Women's fields (91-100% female)	Office clerks Nurses	Textile sewing machine operations Nurses

(Burge & Stenström 1995; Ammatti ja sosioekonominen asema 1990, 1993, 41, 58-77)

educational choices were maintained independently of the different educational systems, reflecting features of the gender system.

Vocational education mirrors the gender inequalities arising in society. When students choose between school subjects, girls and boys are encouraged to enrol in different subject areas. Schools are a critical link in the social processes leading to the gender-based division of labour.

V

CONCLUSIONS AND DISCUSSION

1 Conclusions

This section will go briefly through the results of the study, reflecting on how its findings relate to its theoretical frames of reference, after which the following discussion section will consider the social selection process regulating access to education and working life, diversity in vocational education and working life and the link between educational inequality and the debate on the changes taking place in society.

The *first task* of the study was to explain, from the viewpoint of educational and gender equality, recruitment for vocational education, particularly for commercial education, in the Finnish school reforms carried out in the 1980s and 1990s.

One of the aims of the 1980s reform of Finnish upper secondary education was to achieve educational equality among other things through a two-step system of study field choice. The system was meant to postpone students' choice of specialization line and simultaneously of study level until after they had completed a year of studies, the introductory period of their programme. In addition to equalizing parental background the goals of the reform included equality between genders. Vocational education was the choice mainly of children of parents belonging to the lower and middle social groups, of whom middle-class children applied to college-level education. The selection mechanism operating in vocational education becomes visible through a consideration of the link between students' school success and their social background. The subject of the study, the basic programme in commerce and administration, attracted the more successful children of less-educated parents on the one hand and the less successful children of better-educated parents on the other. Children of better-educated parents applied to college-level studies more often than children of less-educated parents. Successful children of well-educated parents went to the general upper secondary school and after that to university (cf. Kuusinen 1992; Kivinen & Rinne 1995a). Despite the delay in students' choice of their study levels under the two-step selection system, the results showed that a later choice of occupation did not eliminate selection on the basis of students' family background.

To use the terms of Bourdieu's theory of cultural capital, the status battles that take place in the field of upper secondary commercial education are not fought between students in possession of the greatest amounts of cultural capital but largely between middle-class students attempting to maintain their present social position. The field is also the goal of children of less-educated parents who do worse than the other groups taking part in the struggle because they must cross the boundaries of a field. Entering the field requires special qualifications while actions within the field itself are regulated by certain rules. The present study indicated that parents' occupation, in this case their working in commerce and administration, was a source of capital that helped those trying to gain entry into the field.

The educational level of parents who had taken a commercial qualification was slightly above the average among all parents who had completed a vocational qualification. However, the social background of students in upper secondary commercial education was lower than that of tertiary-level economics students. The status battle for the highest positions in the field of commerce is waged in schools of economics and administration and in universities.

Polytechnics have a status between that of the disappearing college level and that of higher education. It may be assumed that the battle for the membership of the middle class fought on the college level will move on to the polytechnics, for even if college-level qualifications are not quite disappearing from the educational map, their proportion is diminishing. As the continued survival of the field presupposes a shared interest, it is likely that the interest is refocusing on strengthening the position of the new school form.

A link with cultural capital may be seen also in gender-related patterns of application to college-level education, even if differing amounts of cultural capital do not alone suffice to explain why women apply to college-level training less often than men. Men applied to college-level studies nearly three times as often as women irrespective of their success during the general course. It may be a contributing factor that men's parents worked in commerce more often than women's parents. In addition, men's parents were better educated than women's parents, making it possible to conclude that men had more cultural capital than women. Considered as a route to social positions, commercial education appears in a different light to women and men. Generally speaking it may be said that women see in it a road of upward social mobility, men a way of securing their own present social position. Women's and men's contrasting preferences were seen not only in the vertical but also in the horizontal distribution of their choices, for the differences between women's and men's choices of specialization line were linked also with their area of specialization.

An examination of the motives that students gave for their choices reveals that the reproductive motive typical of women, a wish to help and work with other people, underlay women's educational choices. The motives mentioned by women for applying to commercial education and to further studies focussed on what are termed the internal factors of work, such as human relations, while men were interested in status and in furthering their career.

The goals of the polytechnics reform implemented in Finland in the 1990s, increasing the use of individual-centred approaches and extending students' range of options, are linked with the general international discussion about the turn of modernity (the postmodern). The starting point of the newly established system of polytechnics has been raising the age group's educational level. Individual-centred approaches and an extended range of study options have been the ideas behind the redesign of curriculum contents, a particular focus of the reform. The findings concerning willingness to engage in further studies among polytechnic students of administration and commerce were partly analogous to those made in upper secondary vocational education. Students' willingness to take up university studies was linked with their social background. Children of the middle class were most willing to apply to university after completing their polytechnic studies. Both parents' education was positively linked with both a general willingness to engage in further studies and the choice of educational level; mother's education seemed to exert stronger influence on students' general willingness to continue their studies and father's education on their choice of educational level.

In commercial education the middle class seemed to be the group most eager to apply, within a study field, for higher study levels and, keeping to the same field, follow the vocational road to universities. This middle-class willingness to continue one's studies is probably explained by the select nature of the group. This is also reflected in the fact that there was no linear connection between social background and choice of educational level. The effect of students' social background on their educational level choices was analysed on the basis of parents' education and occupational field.

In Bourdieu's terms, those who had less cultural capital were least willing to continue their studies at university because for some of them applying to university would mean crossing the boundaries of at least one field. Those with an average amount of cultural capital were most willing to take up university studies. They were chiefly interested in raising their educational level and in upward social mobility. In broad outline, students with greater amounts of cultural capital were not any less willing to study at university than their less well endowed fellows, but they were interested in higher-level studies in the same field (in this case in commercial studies). This finding is consonant with the general observation about the educational behaviour of students coming from different social backgrounds. Those with lower social inheritance educate themselves because they want to secure a position as a wage-earner and gain the qualifications required on the labour market. For the middle class education is a route of upward social mobility where students may acquire personal advantage on the labour market. Those with higher social status see education as a means of developing all areas of life management in accordance with their individual goals (cf. Järvelä 1993).

Altogether the findings support the theories of cultural capital and closure. It is possible to draw the conclusion that there is educational inequality in vocational education, in this case in commercial education, even if the present study allows no conclusion about whether equality is diminishing or increasing. Statistics on vocational education institution leavers for 1980 and 1990, again, show that the social background of college-level graduates was higher than that of school-level graduates (Hermunen 1984, 45-46; Kivinen & Rinne 1995a). However, it could be observed that such differences grew smaller between 1980 and 1990, a change partly explained by the increase in the educational level of Finnish population as a whole.

There were no gender-linked differences in commercial polytechnics students' intentions to apply to university. This finding differs from results concerning the upper secondary vocational education reform, where boys were more eager to take up college-level studies than girls. Nor were there, unlike in upper secondary commercial education, differences in parents' education linked with students' gender. In other words, polytechnics seemed to attract girls and boys with similar backgrounds. The data are too limited to allow very far-reaching conclusions about any changes that might have occurred in gender-specific educational behaviours.

Commercial education differs from other fields of vocational education in that women are in the majority among students in upper secondary and vocational higher education but in the minority among students in higher education. As a rule, in vocational education women are found mainly on school- and college-level programmes and men in vocational higher education (e.g. colleges of technology) and polytechnics, while women are in the majority in the general upper secondary school and in higher education.

The *second task* of the study was examining, from the point of view of gender, the employment and further education patterns of vocational education institution leavers in general and of commercial education institution leavers in particular. The subject was analysed using published statistics.

The study's findings about educational selection already revealed that educational choices are influenced not only by cultural capital but also by gender. The choices that students make within the educational system are reflected in the positions that they gain in working life. Thus working life reinforces educational choices. It is a well-known fact that the labour market is segregated along gender lines.

Five years after graduation women's and men's further education patterns differed in that women had taken a higher qualification more often than men. Commercial education institution leavers differed here from the general trend in that here it was men who had taken a further qualification a little more often than women. Among those who had taken an upper secondary commercial certificate men had continued their studies on a higher level of commercial education more often than women, who in their turn had more often than men taken a qualification on the same level but in a different field. Among those who had taken a vocational certificate men were more often than women both in employment and without employment. Women seemed to be more interested in further education than men. The question of whether this is due to the greater difficulties that women face in finding a job in keeping with their qualifications or to their in most cases higher basic qualifications could not be answered with the present statistical material.

In terms of occupational fields, women's and men's school-to-work transition was found to follow traditional lines. Women worked in service occupations and men in processing industry, which in most cases meant industrial occupational fields. There were gender-linked differences in the socioeconomic status achieved by vocational education institution leavers. Men were employed more often than women both as upper-level white-collar workers and as blue-collar workers. Women in their turn were found among lower-level white-collar workers more often than men.

A closer consideration of commercial education institution leavers' gender-linked employment patterns revealed both horizontal and vertical differences. Women with commercial training worked in the administrative and office technological field while the majority of men worked in commerce. It could also be observed that womens' careers are characterized by horizontal, men's careers by vertical advancement. In addition, men who had taken the college-level commercial qualification (the *merkonomi* certificate) worked more often than women as upper-level white-collar workers. It is characteristic of women's fields that their managing positions are filled by men (cf. Liljeström 1986).

A comparison, where applicable, of fields of vocational education and sectors of working life in Finland and in the United States confirmed that women and men make traditional choices both in education and in working life irrespective of different cultures, educational systems and traditions of women's participation in working life. Making non-traditional choices in education and working life is, with a few exceptions, still rare. The fields of educational and working life were in both countries segregated along similar lines. It has generally been observed that gender-based segregation grows sharper as the proportion of women in the workforce increases. The comparison was carried out only in a few selected fields while leaving educational levels out of consideration.

The findings substantiated the existence of a gender system and a gender contract. The gender-linked segregation characterizing vocational education and working life is connected with the fact that school prepares students for their positions in working life and that individuals are allocated to working life on the basis of their educational choices. The hidden curriculum and the structural correspondence between education and working life are the chief mechanisms operating when education socializes individuals into their future positions in working life.

Inequality of opportunities is manifested vertically - in terms of educational levels - and gender inequality horizontally - in terms of study and occupational fields. There is also some gender-linked vertical segregation. By contrast, the present study allows no conclusions about horizontal segregation linked with social background because the influence of social background was analysed more closely only in a single field. However, other research (Mäkinen, Lehtivaara & Valkonen 1991) does show that different study and occupational fields display different forms of segregation linked with social background.

In interpreting the results it is advisable to remember the non-homogenous nature of the materials on which the study is based. They comprise empirical materials collected at different points of time and official statistics on vocational and occupational choices. The data have various inbuilt limitations and allow conclusions about educational equality in vocational education mainly as regards one specific study field. It is true that in terms of student enrolment commercial education is one of the biggest fields of vocational education in Finland, where either gender has a representation of at least 30 per cent. The materials on commercial education have been gathered at different points of time in connection with different school reforms. The first set of data is part of follow-up materials on the 1980s reform of Finnish upper secondary vocational education, here drawn on for an analysis, from the point of view of equality, of students' choices of specialization line. The second set of data on commercial education is connected with a follow-up of the Finnish polytechnics experiment, here exploited only for an analysis, again from the point of view of equality, of students' willingness to engage in further studies. In addition the study also analyses, in terms of gender, official statistics on vocational education and working life as a whole, further elaborated on by the author.

Moreover, the population studied here is a select one, representing students from the middle (upper secondary vocational education) and slightly higher (polytechnics) levels of the Finnish school system whose background is mainly in the lower and middle strata of Finnish society. As regards their school success the students who have chosen vocational education (particularly those who have chosen commercial education) again represent a middle level, because those who succeeded best at school have in most cases gone to the general upper secondary school and after that straight to university.

The materials and methods used in the study are traditional. Only cross-sectional data from different studies, gathered by using questionnaires and statistics, have been exploited. Educational equality has been considered from the viewpoint of students' own educational choices, not from the viewpoint of the institutional student selection process carried out by the school system. It would be relevant from the point of view of educational inequality to conduct a follow-up study based on age groups, which would also reveal intergenerational mobility (cf. Pöntinen 1990; Eriksson & Jonsson 1993). In addition, materials collected using qualitative methods might have opened additional perspectives on research on educational inequality. Accordingly, a study drawing on both quantitative and qualitative methods might allow a more in-depth interpretation of the subject.

The study did not cover the reform in 1995 of study programmes in vocational education on a modular principle, where students first complete a upper-secondary-level (school-level) programme and then apply to vocational college or a polytechnic. Preliminary results concerning this system reveal that parents' education still influences children's willingness to engage in further studies after their taking an upper secondary qualification. Children of better-educated parents intended to continue their studies at polytechnic more often than children of less-educated parents (Stenström 1997, 64).

2 Discussion

Educational equality/inequality has long interested educational sociology as an aspect of the process of social modernization. The subject was in the foreground in the 1970s and 1980s, when Finland and the other Nordic countries reformed their school systems on the principle of the comprehensive school. It is less popular in the 1990s discussion on educational policy, where the focus has shifted from educational equality to individualization and flexibility. The individualization debate is grounded on the perception of a crisis in the development of society, characterized as a postmodern (Bauman 1992), reflexively modern (Beck 1992) or post-traditional (Giddens 1990) period.

It has been assumed that as a result of educational expansion, differences linked with social background will disappear (cf. Boudon 1974; Boudon & Lagneau 1980). However, this has not necessarily happened. Finns have become better educated, but at the same time this general rise in educational levels has also meant an increase in educational inequality (cf. Pöntinen 1990). Research has revealed that educational disparities between different social groups have remained nearly unchanged for generations (e.g. Husén 1972; Featherman & Hauser 1978; Halsey, Heath & Ridge 1980; Rolff 1981; Kivinen & Rinne 1995a). Blossfeld and Shavit have noted that educational expansion generates inequality. Members of the ruling group have an interest of their own in that the educational system expands and that children from different social groups will, as a result of this expansion, become sufficiently integrated into society. Social exclusion takes place in different ways. Higher social strata exclude other strata also by taking over or clearing new areas (cf. Bourdieu's concept of field). Children from lower social strata are encouraged to choose or themselves spontaneously choose the non-university instead of the university sector.

A corollary of this argument is that the influence of social inheritance will remain; it will not decrease with the expansion of education. This also reinforces the conclusion drawn by Blossfeld and Shavit (1993): the thesis of modernization theory, "educational expansion will lead to increased equality of educational opportunity", may be rewritten as its opposite, "it seems that inequality based on family background will remain in spite of educational expansion".

How then may we improve the educational level of socially disadvantaged groups? Notwithstanding the above, educational expansion is one possible means, leading to higher levels of education in all social groups. In Finland this option is represented by the creation of a system of polytechnics. The first results from the early stage in the development of the polytechnics system show that children of the middle and higher social groups use the polytechnic as an intermediate stage on their road to universities. This finding supports the assumption put forward above that the non-academic educational institution has been reserved for those with less cultural capital. On the other hand, it is also possible to consider that the new institution will give lower social groups increased opportunities for raising their absolute educational level. However, until the polytechnic has established its position in the Finnish educational system it is impossible to draw final conclusions about its place in the system and about its effect on educational equality.

Another way to improve the educational opportunities of those in lower social positions is changing the selection process. This method has been used in Finland at least in the reform of vocational upper secondary education, where students first chose their field of study and only later their specialization line and, simultaneously, their educational level. It was assumed that a later choice of educational level would also increase educational equality. However, the findings of this study revealed that the link between parents' educational background and childrens' choice of educational level was still there.

Student selection on the basis of apparently meritocratic criteria implicitly also includes other criteria. Structural educational reforms are unable to prevent selection on the basis of background factors and gender: in all stages of educational selection these factors, mediated by subjective interests manifested in students' school success and in their choices of where to apply, affect their educational careers. If we want to decrease the influence of gender and background factors on an individual's educational career, then we must try to influence both individual students' educational orientation and their chances of succeeding in the type of education that they are engaged in (cf. Stenström, Määttä & Jalkanen 1987).

The field of vocational education is in principle open to all social groups and both genders. It is used mainly by children from the lower and middle social group, for whom it is a target field. Children of the higher social groups and some children of the middle social group use it as a roundabout way to higher education. Particularly those children from middle and higher social groups who do not succeed at the general upper secondary school use vocational education also as a route to higher positions on the labour market. Such seemed to be the case among male students enrolled at Finnish commercial colleges. Commerce and administration is a female-dominated field where men enter higher-level training and attain, as a result, higher socioeconomic positions than women. Ultimately it is employment patterns, agents' success on the labour market, that reveal the degree of educational and gender equality achieved in practice. From this point of view social reproduction is about the ways in which positions are filled with individuals. In the terms of cultural capital, the future labour market is the theatre of polytechnic graduates' struggle for status. However, at this stage there are no data on gender-related employment patterns among polytechnics students.

Now when a new non-academic higher education option has been incorporated into the Finnish educational system, it will be interesting to see how it affects the attractiveness of vocational education and educational and gender equality. Polytechnics are a key factor in this development towards greater diversity. Until now students in vocational education representing its various study fields have formed fairly uniform groups in terms of background and gender. However, first experiences of polytechnics showed that as regards their social and gender distribution, polytechnic students were closer to students attending vocational education establishments than to university students.

Reflecting on the findings of the study against the background of the turn of modernity reveals that structural factors such as social inheritance and gender still affect student's educational and occupational choices. Even though the modern period has meant changes - social mobility and women's emancipation both in education and in working life - structural factors of this kind do not seem to have grown less powerful nor have grand projects withered away despite the assumptions of theories of the turn of modernity (cf. Jallinoja 1990).

The questions posed or goals set by grand narratives remain unanswered or unattained. By contrast, in political debates their position has been undermined and as social ideals they are dead and buried. In other words, structural inequality has not gone away, but goals involving structural equality have lost much of their appeal. In modern society education and mobility are seen to contribute to educational equality, while in postmodern society they are though to disintegrate old communal social forms, such as the family and the work community. This process is assumed to lead to the break-up of social classes. Accordingly, Beck (1994b) sees social inequality as one of the risk factors involved in reflexive modernity. In this process social change is powered by individualization.

Today's Finnish vocational education has sought to enable students to make individual choices at the same time as it has been feared that such freedom will in the long term lead to difficulties. As the range of available options broadens, supporting and following students in their choices becomes an increasingly important aspect of upper secondary and higher vocational education. It might be assumed that it is students who already have the greatest amounts of cultural capital as a legacy from their parental home who will be best equipped to benefit from an increased scope for individual choice. A follow-up study of this thematic field in vocational education might also be a subject of further research.

Historically speaking education and training have improved women's access to working life. In Finland women's education has been seen as an aspect of women's social position and equality. Findings concerning Finland show that hierarchical distinctions will not disappear with more equal education or more even participation in working life. The distinctions will not vanish even when formal equality has been achieved. Education has been seen as a central means of equalization and as a goal in itself. Inequality stems from gender-based differentiation and from the occupational differentiation that follows from it (cf. Julkunen 1992).

As an educational goal gender equality has been a facet of a more general policy of the welfare state. An educational policy based on gender neutrality and formal equality has also been a means of maintaining the attractiveness of education with the result that less attention has been paid to the reasons behind inequality. Even though the reform of Finnish upper secondary education did away with gender-specific references in the titles of study programmes, students still made their educational choices in accordance with traditional social gender. As the findings show, neither educational routes formally open to all nor gender neutrality in job titles do greatly help in breaking down gender divisions in working life either (cf. Naumanen 1994).

Equality and women's emancipation in education and in working life have been among the grand narratives of the modern period. Even though Finland has lagged behind the general modernization process, it has been able to take pride on the equal position of women. In the Nordic countries wage labour has long been at the core of the modern image of woman (Julkunen 1992, 40-41). Partly as a result of this, on the Finnish labour market women are not a secondary labour force but instead the normalization of women's wage labour has made their participation in working life a structural necessity (Pusila 1993).

A point of view that would combine a consideration of equal opportunities with the acceptance of diversity (gender difference, background difference) would be useful in analysing social selection in education and in working life. A clearer picture of educational inequality and of the educational selection process emerges in studies of a whole age group, which also show both the intergenerational differences affecting educational equality and the rise in the population's educational level. Examining the social selection process in an age group or in vocational education as a whole fell beyond the scope of the present study, which focussed mainly on a single female-dominated field.

Vocational education has received less attention as a field of social and gender selection because it is located on the middle levels of the educational system, while the hardest battles for status are fought on the higher levels of the system. The subject is, however, important because the main function of vocational education and training is providing individuals with the qualifications that they use to gain access to the labour market and to compete for the positions available there. Another factor increasing the topicality of the subject is the fact that one of the goals of the reforms carried out in Finnish vocational education has been enhancing collaboration between education and working life. This theme would be a most suitable subject of a further research project. A study of the selection process as it operates in the field of vocational education as a whole and of the educational and gender inequality that is part of it would make it possible to reflect on the specific nature of vocational education and on how far theories developed to account for the general education system are applicable on vocational education.

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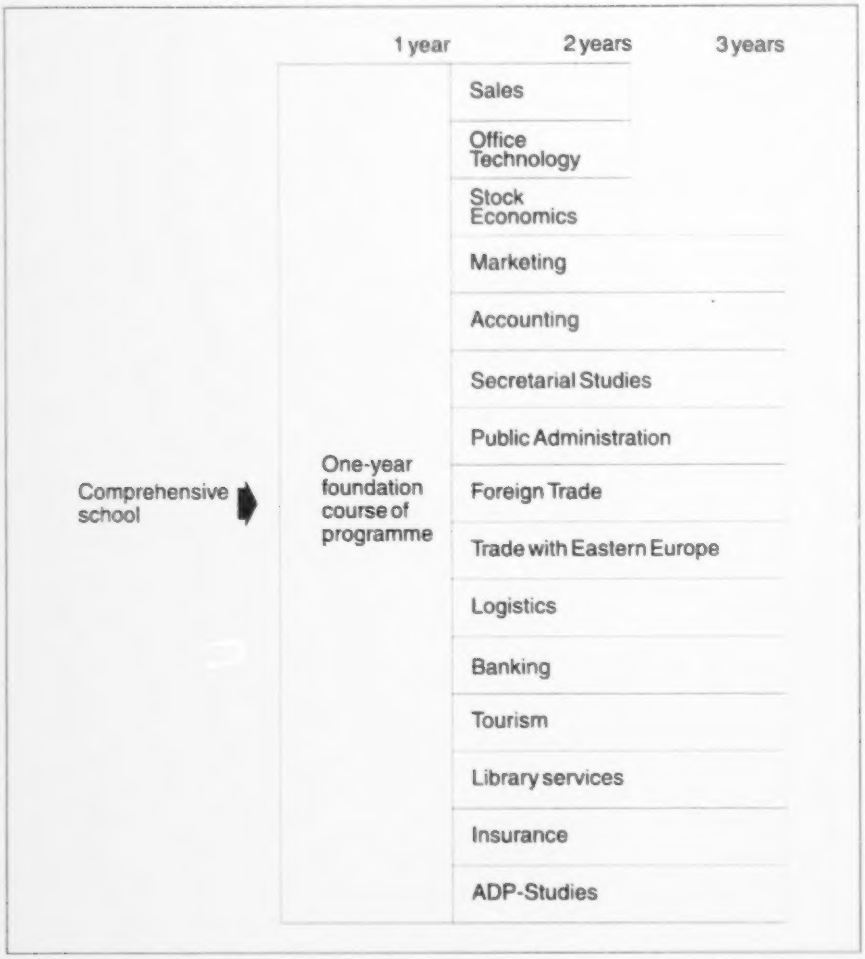
APPENDICES

Appendix 1. *Programme in commerce and administration until 1995*


1 year
2 years
3 years
Comprehensive school
One-year foundation course of programme
Sales
Office Technology
Stock Economics
Marketing
Accounting
Secretarial Studies
Public Administration
Foreign Trade
Trade with Eastern Europe
Logistics
Banking
Tourism
Library services
Insurance
ADP-Studies

Appendix 2. *Socioeconomic position in 1990 of students who completed a basic programme in vocational education in 1985*

	Socioecnomic status 1990								
Study programme 1985	Upper-level white-collar workers		Lower-level white-collar workers		Blue-collar workers		Others		Total
	F	M	F	M	F	M	F	M	
	%	%	%	%	%	%	%	%	N
Men's fields (91-100% male)	12.3	19.2	20.2	42.4	66.3	36.5	1.2	1.9	10972
Heat, water and ventilation	87.5	13.6	12.5	10.8	0.0	75.0	0.0	0.6	516
Vehicles and transportation	0.0	4.5	35.5	17.2	61.3	77.3	3.2	1.0	1996
Mechanical engineering	18.2	13.5	41.5	18.5	36.6	66.7	3.7	1.3	3935
Woodworking	0.0	4.7	6.2	15.5	93.8	78.8	0.0	1.0	701
Electrical engineering	24.0	18.9	43.3	25.1	32.0	54.7	0.7	1.3	3231
Forestry and wood industry	8.0	4.0	80.0	30.3	8.0	64.6	4.0	1.1	593
Male-dominated fields (61-90% male)	14.4	13.7	46.8	25.1	37.1	59.2	1.7	2.0	3542
Construction industry	27.3	18.1	66.0	28.3	5.7	52.6	1.0	1.0	2118
Seafaring	11.0	18.1	27.8	33.3	55.6	45.1	5.6	3.5	162
Fishing	100.0	5.0	0.0	95.0	0.0	0.0	0.0	0.0	22
Surface treatment	8.7	0.0	8.7	7.6	82.6	90.5	0.0	1.9	128
Agriculture	5.2	4.9	36.7	17.0	55.9	74.0	2.2	4.1	1099
Textiles industry	0.0	0.0	100.0	20.0	0.0	80.0	0.0	0.0	13
Mixed fields (41-60% either sex)	6.1	12.9	65.1	33.9	28.2	52.7	0.6	0.5	1145
Printing industry	6.1	9.6	12.2	18.7	81.7	71.1	0.0	0.6	281
Chemical engineering	7.8	16.3	76.6	30.8	14.6	52.4	1.0	0.5	678
Dairying	5.9	4.2	58.8	45.8	35.3	50.0	0.0	0.0	41
Surveying	0.0	5.0	96.5	90.0	3.5	5.0	0.0	0.0	145
Female-dominated (61-90% female)	8.2	22.7	67.8	43.6	23.1	32.3	0.9	1.4	13202
Commerce and administration	8.8	28.2	84.3	53.1	6.1	17.2	0.8	1.5	9190
Crafts and design	24.7	13.6	47.0	8.9	26.2	76.1	2.1	1.4	746
Horticulture	7.3	10.8	43.5	39.8	47.6	48.4	1.6	1.0	284
Food processing	1.3	0.0	25.5	13.7	73.2	86.3	0.0	0.0	284
Hotel and catering services	3.1	5.1	25.6	19.7	70.3	73.9	1.0	1.3	2698
Women's fields (91-100% female)	10.3	6.7	68.4	76.2	20.7	16.0	0.6	1.1	8794
Health care	6.1	6.3	89.7	72.1	3.5	20.9	0.7	0.7	5792
Social services	18.8	62.2	72.7	35.1	7.0	2.7	1.5	0.0	798
Clothing technology	2.6	7.1	34.2	50.0	61.8	42.9	1.4	0.0	601
Home and institutional economics	4.3	0.0	48.1	42.9	45.6	57.1	2.0	0.0	1603

(Koulusta työelämään 1993, PC-AXIS Statistics)

Educational equality has long been a central research subject in sociology of education as well as a special focus of educational policy in the 1970s and 1980s. In the 1990s equality is mentioned less often in the discussion about educational policy, where the focus has shifted from equality to individualization and flexibility. The study describes social and gender equality in vocational education, particularly in commercial education, and in working life in Finland. The starting point of its consideration of equality are the social selection process on the one hand and reforms of Finnish vocational education on the other.

Reflecting on the findings of the study against the background of the discussion on the turn of modernity reveals that structural factors such as social background and gender still affect student's educational and occupational choices. In other words, structural inequality has not gone away, but goals involving structural equality have lost much of their appeal. Despite the lack of interest today in the theme there is reason to consider educational policies as a question of inequality because education is one of the ways in which inequality is transmitted from one generation to another.

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